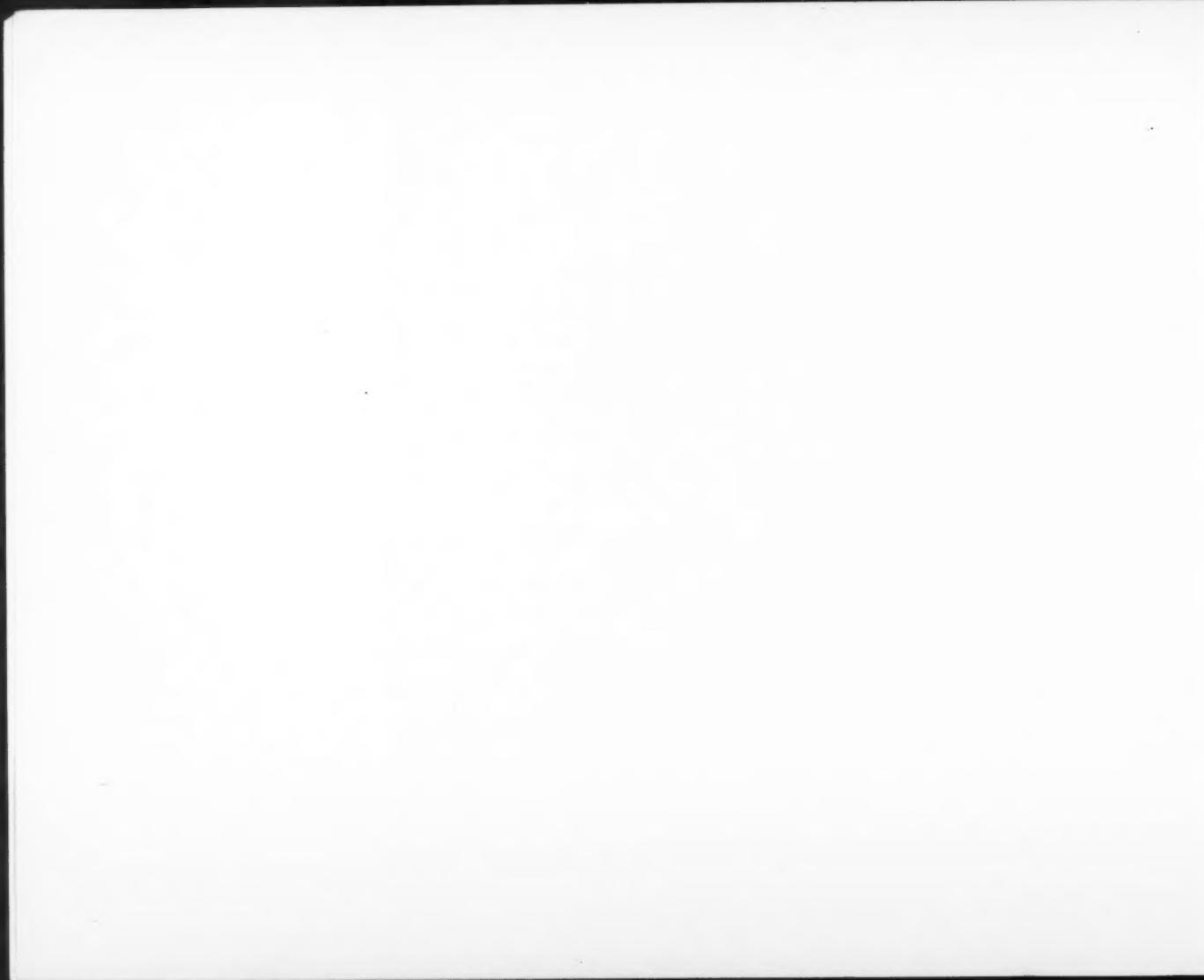


CCRC CLAREMONT
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CCC CONFERENCE 1961



Claremont Reading Conference

Sponsored by Claremont Graduate School

TWENTY-FIFTH YEARBOOK

Edited by

MALCOLM P. DOUGLASS

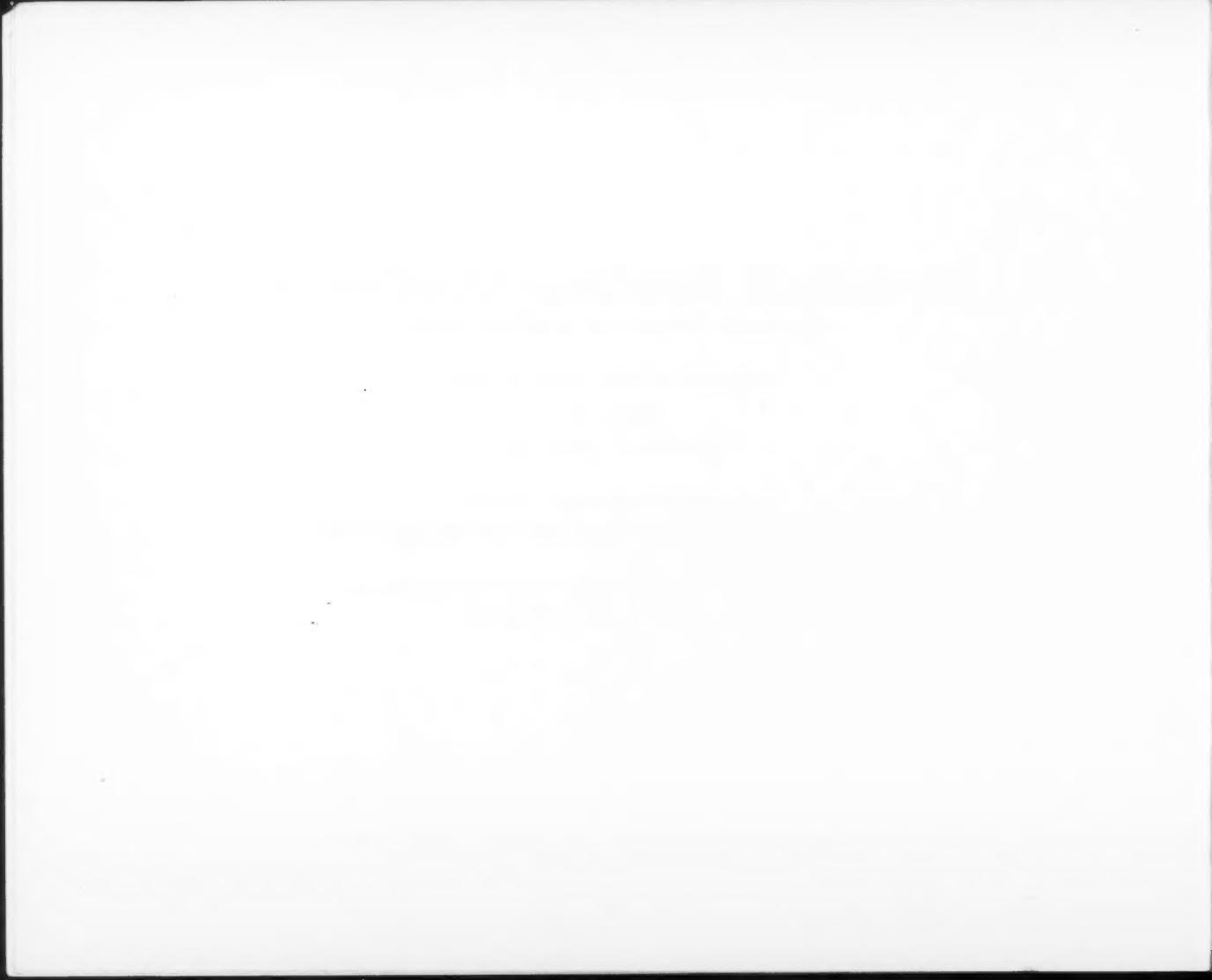
Permanent Conference Theme:

READING IS THE PROCESS OF MAKING DISCRIMINATIVE REACTIONS

Special Theme for the 28th Annual Reading Conference:

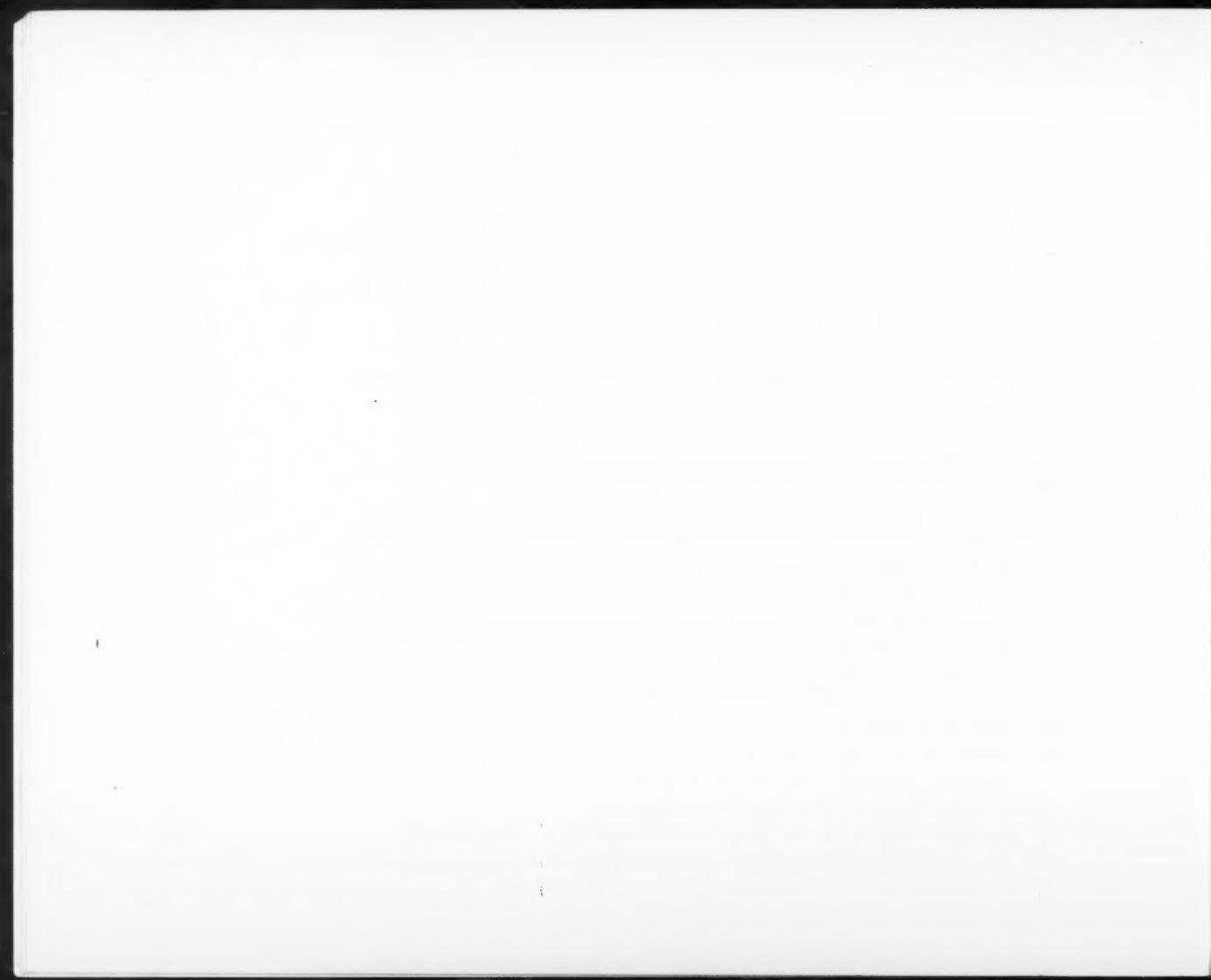
FACING THE ISSUES IN READING

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Foreword

The Twenty-Eighth Annual Claremont Reading Conference was held on the campuses of the Claremont Colleges on April 7th and 8th, 1961. The special theme of this Conference was "Facing the Issues in Reading." The permanent theme of the Claremont Reading Conference continues to be "Reading is the Process of Making Discriminative Reactions."

Four major activities were emphasized during this relatively short but intensive Conference. General Sessions were designed to bring before all the conferees some of the major issues in reading which teachers and administrators, school board members, and parents face today. Discussion groups explored specific aspects of problems of special concern to Conference participants. An Authors' Tea brought outstanding authors before the Conference, including the 1961 Newberry Medal Award Winner, Scott O'Dell. Finally, children participated in the Conference, as members of panels discussing problems in reading of concern to learners and in conjunction with the Authors' Tea.

The Articles which have been contributed to this Yearbook reflect many, but hardly all, of the issues discussed during the course of the Conference. In the variety of topics presented, we see once again that the improvement of reading teaching pervades all aspects of the school's work and, indeed, goes beyond that into the home and community. Spencer, in this connection, discusses the broad nature of reading and the significance of understanding the reading process in building a balanced reading program. Mrs. Hardy points up issues in building a literate society for which school board members, as representatives of the broader society, should have concern. An anthropological analysis of problems faced by the schools, and by the children and teachers who inhabit them, provides Henry with some suggestions for improving methods and materials in the teaching of reading. Goodlad discusses the graded lock-step under which our schools are organized, reforms and changes which are being attempted under various guises, and what they mean for the reading program. Taylor describes experimental designs, including Team Teaching, which are having an impact upon reading teaching, and Clowes views the changes taking place which affect reading in one of our most populous and fastest growing states.

New approaches to the teaching of reading have been gaining increasing attention during recent years, and Conference participants were afforded the opportunity of hearing in detail

how these programs were conceived, put into effect in classrooms, and evaluated. Allen's article on the language-experience approach to reading provides a detailed discussion of one such carefully conceived and developed program. Following his discussion, a teacher, a principal, and a director of instruction explain how the language-experience approach was started in one of their schools. Sperry contributes a carefully documented statement which evaluates this and other attempts to achieve greater individualization of learning in reading. And Naslund, Brown, and Hopkins provide principles by which any school reading program may be judged.

Physiological and psychological aspects of reading attracted the attention of many of the conferees. Farrington here includes a statement on vision screening and Helton has contributed a paper on the sensorially deprived. Dubnoff, Fargo, and Weiss have drawn upon their experience in working with brain injured and emotionally disturbed children to suggest ways of helping these children acquire skills in reading.

Increasing attention is being paid to high school and adult reading programs, and considerable time was devoted to this aspect of reading teaching and the learning processes involved in reading. Wamba and his panel describe several successful high school programs now in effect in Southern California. A paper on teaching machines by Pipe indicates applications of mechanical devices to the improvement of reading in all fields of learning. Fledderjohann discusses problems in working with the remedial student at the high school level, and Canavan presents information about junior college reading programs.

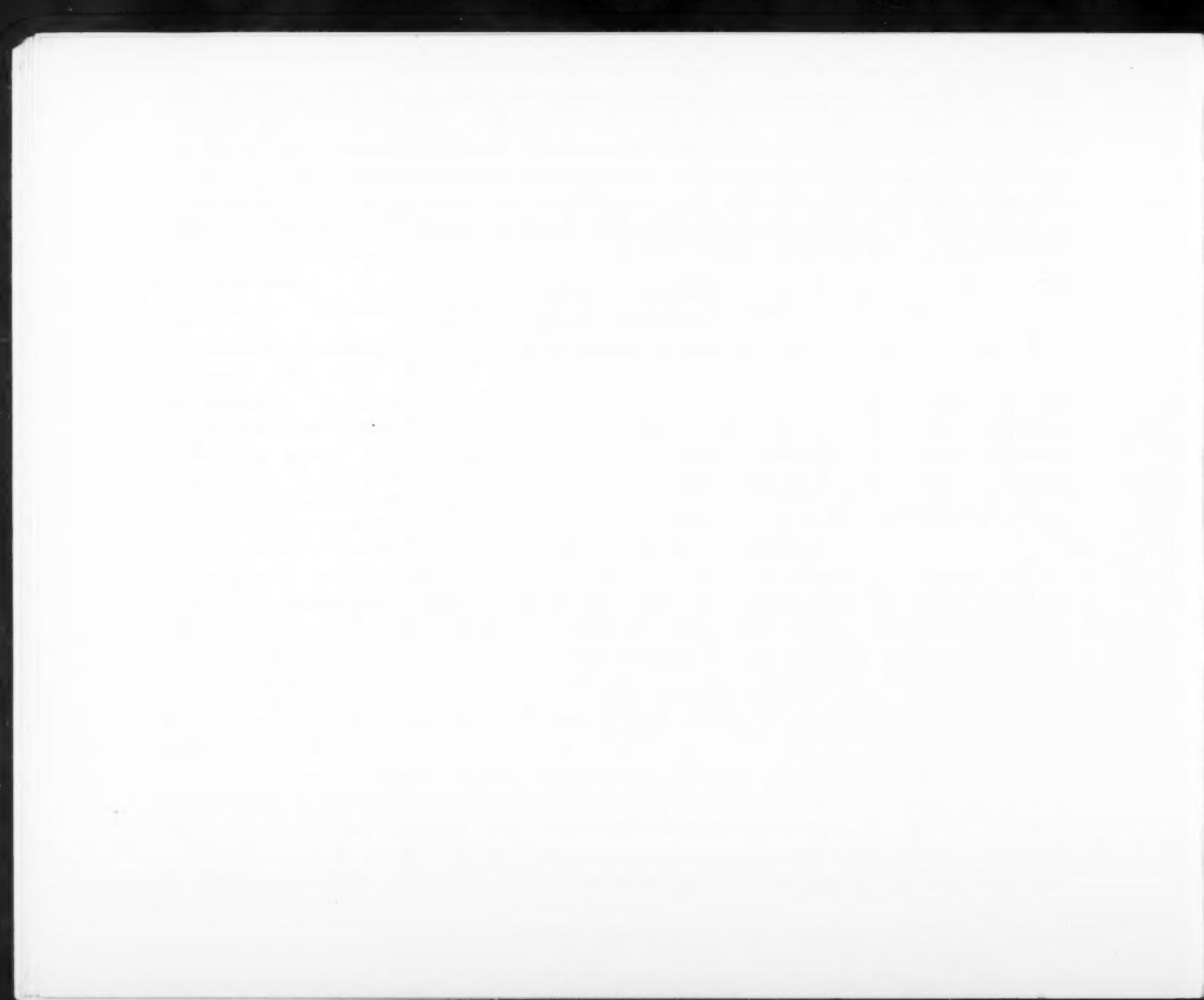
A number of acknowledgments are in order in connection with the development of the Twenty-Eighth Annual Reading Conference and this, the Twenty-Fifth Yearbook, which has resulted from it. Alpha Iota Chapter of Pi Lambda Theta, after many years of co-sponsoring the Reading Conference, returned to active participation by planning and arranging the Authors' Tea. Conference members received, in addition, a publication, "According to Us," written by members of Alpha Iota Chapter, which provided valuable information about the contribution of children's literature to reading, the authors in attendance at the Tea, and their publications.

Alpha Omicron Chapter of Phi Delta Kappa provided invaluable assistance with the arrangements at the Conference, aiding speakers and participants to their proper places and helping the Executive Secretary with the inevitable mechanics of handling some 600 persons.

Thanks, too, go to the Planning Committee, whose good ideas in every regard resulted in a highly successful Conference: Mrs. Irene Whitcomb, former Director of the Claremont

College Curriculum Laboratory, Mrs. Barbara Provost, Riverside County Schools, Dr. R. Van Allen, San Diego County Schools, and Dr. John A. Brownell, Claremont Graduate School. Through their aegis, over 90 speakers, discussion leaders, and panel members were brought to the Conference. We are, of course, grateful to each person who participated in the Conference and contributed his time, talent, and ideas to it. Finally, but hardly least of all, we have cause to be grateful to Mrs. Georgenia Irwin, Executive Secretary for the Reading Conference and Yearbook, whose organizational talents and personable ways smoothed out every rough spot.

MALCOLM P. DOUGLASS, Director
Claremont Reading Conference,
Editor, Twenty-Fifth Reading Conference Yearbook



The Nature of the Reading Process and Building Balanced Reading Programs

PETER L. SPENCER

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By way of introduction I should like to review briefly a few points of the history of this conference. During the summer of 1932 the conference began as a feeble infant. Its first expression was, however, a cry of protest against the traditional restrictive practices then operative with concern for reading.

Like another babe in history, it was left floating among the academic bullrushes in the hope that some understanding and sympathetic soul might find it and nurture it to maturity. Within a brief time a group of modern Pharaoh's daughters, viz.; Alpha Iota Chapter of Pi Lambda Theta, discovered it and adopted it as their ward. For some twenty-five or more years they nursed and cared for it, guiding its development, financing its sessions, and publishing and distributing its yearbooks.

Under their expert supervision and guidance the conference grew and developed; always, however, maintaining its original purpose: *the presentation and implementation of a more tenable idea concerning the nature of the reading process and of the ways in which that process serves mankind.*

A few years ago they were surprised and pleased to learn that this is the oldest conference in America that has consistently dealt with reading. They experienced even greater pleasure when Dr. William S. Gray, the dean of American students of reading, pointed out that this conference is the "only conference with a message." He amplified that statement by citing the conference theme and asserting its intrinsic validity.

In 1958 the conference held its final session under its old sponsorship. In that year it published the twenty-third volume of its distinguished yearbook series. It had successfully survived its infancy and adolescence and had now reached a status of "legal maturity." Hence,

like sensible parents, its sponsors released it to seek its own associates and to direct its own course, hoping all the while that it would continue to grow and that it would attract worthy associates.

Since this is the first session following the untimely death of Dr. Gray, it seems appropriate that we turn to him with respect and appreciation making use of another of his timely expressions. Some years ago he published a book with the title, "*On Their Own in Reading*." That book was designed to describe the development of competency and independence on the part of readers. Today we are witnessing a dramatic illustration of that idea as applied to this conference.

Many of its former sponsors are gathered here within this large group of participants joyously witnessing their creation and former ward now "*On Its Own in Reading*." It would be difficult to express their feelings of gratification as they recognize their "baby" now on its own, but still holding true to the purpose for which it was created. The conference theme is still the same theme which has held together its founders and sponsors through the years.

Under the directorship of Dr. Malcolm Douglass and now under official sponsorship of Claremont College the conference shows every evidence of being fully developed, ready and equipped to serve. It has continued the publication of the yearbook series and it has taken constructive measures to increase the contacts with the instructional programs in the schools.

The special theme for this, the twenty-eighth annual session of the conference, is "*Meeting the Issues in Reading*." In order to proceed constructively with the consideration of that theme there is need to establish some commonality of concern. For example, we need to make clear what the term "reading" is intended to denote. We need to identify the "issues," and we need to delimit the degree to which those issues are designed to be met.

Some years ago I was privileged to hear Dr. Robert Millikan discuss "*The Value of an Idea*." I recall that he pointed out how tremendously important a good idea can be. He also made clear how devastating a poor idea may be if it is accepted and made the basis for human behavior. There is need to scrutinize ideas with great care.

This thought is illustrated and reinforced by an anecdote regarding Dr. Einstein. Someone asked Dr. Einstein how he accounted for his great and unique contributions to science. Without hesitation, Einstein replied, "*I challenged an axiom*."

To be able to "challenge an axiom" and then successfully to demonstrate that the challenge

was justified is the essence of good thinking. Too often there is a tendency to assume an idea as being valid and valuable without observing what it does when applied in human behavior.

There is a third statement similar to those cited above which has bearing upon our present consideration. It is, "*Beyond the Obvious Lies the Truth.*" That which is obvious is very likely to be superficial and symptomatic. *Truth* is not likely to be so readily discerned. It will be achieved only with greater effort.

With these ideas serving as a frame of reference let us approach the consideration of the conference theme, "Meeting the Issues in Reading." This conference series was initiated to "Challenge an axiom," viz: *that reading is a special type of behavior which must be learned and which is utilized mainly in response to printed-word stimulation.*

That printed-words must be read in order that they may serve effectively the process of communication is self-evident, *i.e.*; axiomatic. But, that they constitute the whole or even a major portion of the stimulation which men must read is not a tenable corollary. Spoken-words, as vehicles for expression and communication, are comparable in every respect to written or printed-words and they surely must be sensed and interpreted, *i.e. read*, efficiently. Furthermore, words are merely symbols for ideas. The creation of the ideas to be symbolized is prerequisite to the use of words in any form for their expression.

This conference, throughout its existence, has presented the thesis that "*reading is the process of making discriminative responses.*" The modifier, *discriminative*, expresses a very important aspect of the definition. Numerous synonyms for that expression are in frequent use in educational literature, *e.g.*; "adaptive," "adjustive," "apt," "fitting," "suitable," etc. The implication is that the response has been designed to serve the needs of the reader in the situation as the reader comprehends it.

A second important aspect of this concept is that it specifies no particular stimulus. Stimulation is implied, certainly, since response is indicated. However, the human body is equipped with many sense processes, *i.e.*; with many avenues of stimulation, and all of them must be read. There are important types of reading associated with each of our sensory processes. For example, we do visual-reading, aural-reading, tactile-reading, thermal-reading, olfactory-reading, kinesthetic-reading, etc.

This conference has pointed out that reading is an innate behavioral endowment. Reading is as native to human behavior as is digestion, respiration, or any other of the fundamental

life processes. *THAT* one will read is assured by nature. But, *WHAT* one reads and *HOW WELL* the reading acts are performed are heavily affected by one's environment and one's experiencing.

To state that we begin to read at a certain age or at a specified stage of development makes about as much sense as to assert that, "Life Begins At Forty." Actually reading, like life, is operative prior to birth and serves continuously throughout the life span. However, there is also a sequential development of one's abilities with reading, and there is also shifting or redirecting of concern for what is important to be read with care. Among human beings there is no such person as a "non-reader," Everyone reads something. There is, however, a very considerable number of poor or inefficient readers as regards many of the important phases of our environment. Educational consideration for development "in and through reading" will be best achieved when it is directed toward particularized reading tasks. For example, Ann Bryan McCall pointed out that educational development consists in learning to read more effectively "oneself, other people, and things."

Given such a broad and demonstrably pertinent frame of reference for educational concern, one readily senses how inadequate is the restrictive concept that reading is merely a special type of behavior which is used mainly with printed-word stimulation. Printed-words are only one of multitudinous "things" which concern human behavior.

This conference has identified the reading process as being the act of sensing a stimulus situation, of interpreting that which is sensed, and performing an adaptive response which is designed adequately to cope with the sensed situation in a manner that is advantageous to the reader. For the facilitation of educational consideration the process may be conveniently structured into four sequential segments, each of which has its special characteristics and its corresponding educational problems.

The first or initial segment of the reading process is the *stimulus*. Actually the stimulus is peripheral to the reading act. It exists, very often, whether or not it is being sensed. For example, the printed-words exist in a book whether or not some one peruses them.

The second segment, and the first which is intrinsic with the reading process, is the act of stimulation or reception, *i.e. sensing*. There are many sense modalities thru which stimulation occurs. All are important for a proper consideration of reading behavior. There are characteristic types of reading associated with each of our sense modalities.

The third segment, and the heart of the reading process, is *perception*. Perception is the process of creating meaning and giving significance to that which is sensed. Edgar Dale has aptly characterized this stage of the reading process as "changing sensitivity into sensibility."

The fourth and final segment of a reading act may be identified as the *response* or *expression* phase. The *reading* has occurred during the preceding segment. During the response stage the reader is endeavoring to express by means of adaptive or adjustive behavior his understanding of the situation which he has sensed and interpreted. When the response behavior is aptly performed, it serves as a fair measure of the validity of the reading. However, when the behavior is inept, it is sometimes difficult to determine whether the deficiency is due to the reader's understanding or to his inability to perform as effectively as he perceives. Shakespeare put it very well when he wrote, "If to do were as easy as to know what were good to be done"

The reading process may be structurally pictured as follows:

STIMULUS	STIMULATION	PERCEPTION	EXPRESSION
Any thing which activates any sense receptor.	The activation of sense receptors. Transforming non-neural impulses into neural impulses.	Cognition, recognition, association, creating meaning, giving significance, formulating plan of action, activating and directing response mechanisms.	Performing the adaptive responses as directed, e.g.; orally expressing the words and word patterns as perceived under visual stimulation.

Of course, reading is a continuous behavior process. The response expressions are in turn read in association with the stimulus which provoked them. The response directives are what have been pertinently called "Provisional Tries" for coping with the situations as sensed. If the response is aptly performed, and if it appears to meet the needs of the situation, it serves to confirm the reading. If, however, the response proves to be unsuited, it is necessary to determine whether the fault lies with the perception, *i.e.*, the reading aspect, or with the performance of the directive. Each reading act arises out of, emerges from, a preceding reading act, and merges into subsequent reading behavior.

Each of the structural segments of the reading process constitutes an area of special regard for us as educators. For example, since one's environment abounds with stimuli for reading, there is need to develop selectivity regarding *what* one will read with special care. Knowing

what to read in any given situation is an important aspect of efficiency with reading. Comparably, arranging stimuli which are readily readable is a prominent factor in the facilitation of communication.

Among the "issues in reading" the problem of *what to read* needs careful consideration. The current concern for instruction in "phonics" or "phonetics" is a case in point. The "what-to-read" focus of such instruction is upon the "oral-aural cues inscribed within visual symbols." It is a "look-and-say" procedure altho, strangely enough, it purports to be opposed thereto. Oral-aural cues may facilitate the process of transforming visual word symbols into corresponding spoken-and-heard word symbols, but unless the reader can associate meaningful referents with the words when spoken or heard, communication does not occur. There is need to recognize that *words are merely symbols of ideas*. Therefore, attention needs to be centered upon the ideas and upon processes of ideating. In this connection it is well to point out how the restrictive definition of reading impedes this process.

Identifying reading as a special type of behavior for responding to printed-word stimulation excludes from the reading program the experiences requisite for creating the ideas which the printed-words symbolize. Without the ideas which they symbolize, words become counterfeit as media for communication. Educationally there is need to distinguish between *primary reading activity* and *secondary reading activity*. Primary reading consists in the direct experiencing of things in their concrete existence. This is the source of ideas which, for convenience, are symbolized. Secondary reading, on the other hand, deals with symbols to which meanings must be associated as the arrangement of the symbols is designed to map.

The second stage of the reading process has to do with the efficiency of the reception of the stimulation. Developmental instruction programs have been strangely remiss in their consideration of the receptive process. I notice with pleasure that this conference program has a section which is concerned with the processes of seeing and of hearing. That has been a consistent procedure with the sessions in the past. The yearbooks of the conference are rich as a reference source for discussions of the sensory processes. However, there is much still to be accomplished in that regard before we shall have effectively served this phase of reading behavior.

Since the term reading is so commonly associated with the process of visually sensing printed-words, it seems appropriate that we consider the process of visual reception, i.e. seeing,

at this time. Comparable consideration should properly be given to the other sensory receptive processes if we treat of reading in its most tenable identification.

Sight is the process of sensing light waves and of transforming them into visual impulses. This transformation is accomplished by cells of the retina assisted by the other parts of the eye. Visual perception, commonly termed "vision," is a perceptive process which is performed by other areas of the central nervous system, particularly the brain.

A proper consideration of the processes of sight and of visual perception has been impeded by another of our "axiomatic" ideas, viz.; by accident, or other causes, sight or visual perception may be destroyed, hence care must be taken to prevent blindness and to conserve sight. Laudable and desirable as that idea is, it has tended to direct the reading of the visual process away from some of its extremely important characteristics. While sight and vision are gifts of nature, they are processes which are amenable to development. Some of the development consists in aiding the seeing process by means of optical instruments such as microscopes, telescopes, and various devices for transforming non-visual stimuli into visible evidence, e.g., x-ray photography. Other forms of development have to do with learning how to see more effectively and how to perform visual perception more efficiently.

The defectiveness of our reading of the visual process is well illustrated by the fact that visual reception is commonly measured by a device which measures only monocular acuity and that at a distance of twenty feet. This seems unexplainable when even a casual observation reveals that printed-word reading is most frequently attempted with two eyes and at a distance of approximately fourteen inches. The differences between the monocular seeing of a single letter form at a distance of twenty feet and the binocular sensing of words and word patterns in a continuously changing sequence at a few inches are numerous and educationally important. For too long those differences have been ignored in our programs for developmental reading. Investigations have revealed that efficiency in seeing is an educational achievement which few persons accomplish but which can be attained thru proper educational assistance.

What has been pointed out concerning visual reception is equally true with regard to our other reception processes. One of the "issues in reading" is that of implementing and facilitating the sensory avenues thru which our reading is initiated. We need to be producers of sensory efficiency as well as consumers of sensory processes.

The third segment of the reading process is the one in which the actual reading is accom-

plished. This is the little understood but extremely important process of perception. During this segment sensory impulses are transformed into ideas and they in turn are transformed into neural impulses directing performance of our reacting mechanisms. The sensory impulses from all of the receptor organs which are activated are amalgamated, combined with the memory images which are recalled or "retrieved," given meaning and significance in the light of the perceiver's attitudinal biases and his goal purposes. This is the heart of the reading process and *it is always accomplished silently*. The two preceding stages and the final stages are in a very real sense peripheral but none the less important.

The process of making memory images readily recallable and of expediting their association with present sensory stimuli is one of great educational importance. To the extent that organic processes and general metabolism factor in the facilitation of recall, assistance from health services may be needed. However, educational development must accept responsibility for leading the educand to utilize the products of previous experiencing effectively to aid in giving meaningful significance to situations presently being sensed.

As this conference has repeatedly pointed out, restrictive definitions of areas of knowledge or of processes of behavior tend to impede the perceptive process. For example, when the consideration of phonics or phonetics is restricted to the identification of sound cues within printed-words, it fails to utilize the development of aural reading and of phonic expression which occurs with music, and with other applications of sound-reading. Recognizing that reading occurs with all sorts of stimuli and that it functions in all types of human behavior tends to facilitate the spread of learning and thereby to aid the process of giving meaning to presently sensed situations.

The final segment of a reading activity has to do with the performing of the response adjustment, *i.e.*; *with the expression of what was read*. When the expression takes the form of overt behavior, it can be read by other persons as well as by the performer of the response. To the degree that the response effectively expresses the reader's comprehension of what he has read, it may serve as a measure of the quality of his reading. However, when the act of responding presents aspects which interfere with the facile expression of the reader's ideas and purposes, it may well give a faulty impression of the true quality of the reading that was performed. For example, my ability to choose words and to arrange them in sequential order and then to express them with appropriate phonic emphasis may be inadequate to communicate to

you the products of my thinking. If such is the case, the fault may lie with the expression segment of the reading process rather than with the perceptive segment. Of course, the perceptive segment may have been faulty also, but until it is adequately expressed there is no way of determining that.

The response or expression segment of a reading activity is almost as peripheral to the actual reading as is the stimulus segment. The reading has occurred prior to the expression or the adaptive responding. *All reading is done silently.* The term "reading out loud" is a semantic misnomer, since it refers to the expression of the reading which has been accomplished and which serves as a directive for the responding. The term "oral reading" may have educational values but it misrepresents the true nature of the activity. The words have been sensed and perceived previous to their being spoken. The speech is an expression of the reading and not the reading itself.

Each of the stages or segments of the reading process as they have been identified has educational significance. While they differ substantially as to their intrinsic natures, they are dynamically interrelated to such an extent that inadequacy in any stage affects the adequacy of the whole process. In like manner, each activity of reading occurs in sequential relationship with the acts which have preceded it and with those which follow. This condition naturally raises a question as to what constitutes *the* reading program of our schools.

This conference has presented reading as being synonymous with learning, with perceiving, and with the making of adaptive responses. Since the educational development of the individual needs to be balanced and to be equated with his needs, there are general phases of reading development and there are special phases as well.

The entire curriculum is the school's reading program. What one reads is the distinguishing feature which identifies the various areas of subject matter. How that reading may be most effectively accomplished is a proper concern for every instructional endeavor. Pointing out the WHAT and assisting with the HOW are the functions which are implied by the statement, "Every teacher is a teacher of reading."

Instruction *IN* reading may or may not be concerned directly with printed-words. It has to do with the developing of abilities to read more effectively the things of concern for a particular regard for reading. Instruction *THROUGH* reading is a different matter. While instruction *THROUGH* reading is not entirely disparate from instruction *IN* reading, the major

emphasis is placed upon the achieving of knowledge about the things being read. Balance is important as regards these differing emphases in a developmental reading program.

Recently there appeared in the *Air Force Magazine* the following statement: "The World, for the first time in history, has been reduced to manageable size; and that means that sooner or later, by orderly process or by violence, someone will manage it; either a world democracy or a world dictator." (Van Zandt)

Instruction *in* reading will aid one to sense and to identify the words and word-patterns of the preceding statement, but it will be only *through* reading that the import and the importance of the word-map will be comprehended. Conceiving and then administering a program of developmental reading which will bring about, "by orderly process," a world democracy constitutes a challenge of the first magnitude. In order to accomplish such a goal we shall need a well balanced and highly productive program which has as its major concern the development of abilities effectively to read ourselves, the other people on the Earth, and the things which affect human behavior.

In a program of such magnitude trivia have a place, but we must not become bogged down by them. We must think broadly and creatively. Ideas and ideals are matters of great importance. We must learn to "challenge axioms" and make them intellectually valid or discard them. We must read "beyond the obvious." We must utilize effectively all of our sensory avenues. We must provide a balanced intellectual diet as well as a balanced nutritional one. The entire curriculum is the school's reading program.

A School Board Member Looks at the Reading Program

GEORGIANA HARDY

*Member and Past President, Los Angeles City School Board**

As a school board member, I would like to discuss the entire area of the reading program, not only from the point of view of the administration, but also in order to share with you what the general public, I think, want and talk about in connection with reading as taught in the schools.

In the first place we are aware, as I am sure all of you are, but the public perhaps is not, that our children today *are* reading. They are reading well and they are reading more and taking out more library books than a generation or two ago. Why then so many questions from the public about whether or not they are reading?

I think there are popular misconceptions as to what reading is. One of these involves reading out loud. Not too long ago I was buying a pair of shoes and the shoe salesman recognized me as "the book lady." Then he asked, "Why can't children read?" I responded, "Doesn't your child read?" and his response was, "When I was a child, every day I came home and read to my parents. I would stop at a comma, come to a complete stop at a period, and raise my voice at an exclamation point or question mark." I said, "That's very interesting. Does your child like to read?" He said, "Oh, he reads all the time but he doesn't like reading out loud. What's the matter with the educational system?" Then I said, "Well, you're a shoe salesman. No doubt you read innumerable catalogs and newspapers about styles in women's shoes and what you should be ordering for your shop—pointed heels and toes, and so forth. How often do you read out loud? How fast do you want to read your catalogs? Which is more important to you, to understand what they say or to read them to me or somebody in the salesroom?" He said, "Is that the reason that my child likes to read so much but doesn't like to

*Mrs. Hardy conducts a weekly book review television program, for which she received the Peabody Award.

slow down to reading out loud?" I said, "This could be one of the reasons," and he seemed satisfied.

Another of the reasons of course is the one brought up by *Why Johnny Can't Read*, as to whether or not it is more important to be able to sound out words without understanding what they mean or more important to understand what they mean without being able to pronounce them. Now, I have an early and unhappy memory of myself. The first time I went to a zoo, with great enthusiasm I said to my mother as my older brother, age 9, was standing there, "Oh, look at the lovely oring outing." My brother burst out laughing and teased me for about five years. It was an orangoutang but I knew what it really was! I had seen it in a book. It had a personality to me, but the fact that I always read it oring outing instead of orangoutang was just one of those things that happen. If I had been so frustrated that I wouldn't even read about an oring outing because it was an orangoutang, I probably wouldn't be as good a reader as I am now. So here is another area in which we have confusion.

And a third area is that I think adults have a faulty impression as to how well they read. Place in front of the average president of a PTA (I don't mean to pick on any group), or of the Woman's Auxiliary of the Church or of the Kiwanis Club, some literature they have never seen before and say, "Read this aloud to the group." It is an appalling experience. You know, if they have read their own notes in advance, they can manage to stumble through, many of them, but give them something new, outside their own area of competence, and they too are not very good readers. In fact, they are probably less good readers than most of our young people in high school and college, including junior high school.

A fourth, of course, is the very different schooling of many of them from present day schools, at least in our large urban areas and some of our small areas, which include a large number of children who are "culturally handicapped." Most of the middle-class people who criticize the ways schools are going didn't go to schools with children of this particular background —this particular kind of home environment. So they remember school as all children with neat little clothes and white handkerchiefs in their pockets, and they do not know school as we know school.

Recently I talked about this with Dr. Robert Hutchins. We argued about this because he keeps saying that we could be doing better and I keep saying that the students I'm talking about have never gone to Chicago University, never gone to Yale, that they are a wholly differ-

ent group of people whom he has never even met. So here is an honest problem in the minds of the public because they don't have the facts on which to form opinions.

Another aspect, however, that I would like to point out as a School Board member is quite different from this but still of concern to many parents. I do believe that many children in our schools could move more quickly in their reading program than is permitted by their teachers. I am now speaking about elementary schools. Many a second grade teacher, I have found, is not allowed to permit a child to read third grade books even if a child is capable because what would the third grade teacher say next year? How frustrated that third grade teacher will feel because the child has already read *Mary Poppins* which is a fourth grade book! Oh, we cannot have this kind of morale problem in our schools to make them stay on "Come, Dick, come! Stop, Jane stop!" Now this is very frustrating to the public and extremely frustrating to me. It is not only, I may say, in the reading program. My granddaughter, a second grader in a school district with which I have no connection, I am happy to say, is frustrated because in arithmetic she knows how to carry but the teacher says we don't carry until the third grade, so we must do examples that do not involve carrying. Practically all the children in this particular school are capable of carrying in the second grade. Why in the world shouldn't they be allowed to carry? Why must they be bored to death by adding 3 and 4 when they can do 11 and 19? Now having jumped into a different discipline, you can see I am not criticizing you, my friends. But there is a lock-step effect about our so-called "Course of Study." In the morning paper I saw that we are now quite close to having a multiple choice of textbooks at the elementary level. I believe this is a good move. However, many of our school districts not only supplement the State textbooks at the present time but also have elementary libraries. And I get very unhappy when I see a second or third grade teacher pushing her children into the library and saying, "Here is the second grade shelf. You may not take anything on the third grade shelf or the fourth grade shelf because what would there be left for you to read in the future?"

Heaven preserve us! With all the books in the world! It is horrible!

Another interesting fact from my point of view is that many teachers are overprotective about children reading things they don't understand totally. I, myself, read *The Three Musketeers* long before I knew very much about French history. On re-reading it I may have read something else into it, but should I have been told that I couldn't read *The Three Musketeers*

until I understood the background of the situation? I am exaggerating, but I think there is too much of this.

The school library at all levels should have books that are more advanced than the child is assigned at his grade level. In other words, I think that the elementary schools should have 7th and 8th grade reading, the junior high school should have 10th and 11th grade reading, the high school should have freshman and sophomore books available to students who are able to use them. I refuse to admit that we have to go lock step through the 6th grade and that when you have reached the 6th grade you aren't supposed to know anything that jumps over into junior high school. The student who is capable of broadening his entire base through reading will do much better in Junior High and Senior High and will hopefully not have to repeat in freshman year in college a basic reading or English course. And so I think there should be more crosshatching and flexibility in what is taught.

Now we of the Los Angeles City Board of Education think we have a policy about flexibility, but we go into classrooms and find that the teachers haven't heard about it. Whether they have not heard about it because they chose not to hear (we pride ourselves on our in-service training, but let's face it, there are many people who take out of any lecture or speech only the things with which they agree and completely miss the rest), or whether it is that the principal enforces to some extent his ideas as to whether certain material should be taught at a given stage, or what—I don't know. But it is my conviction that a major ingenuity of the American educational system as compared to Europe is this possibility of flexibility which we keep talking about but which we don't do enough about. In France, which has, of course, a nationally controlled system, they pride themselves on the fact that you can walk into any 5th grade at 11 o'clock on the second Tuesday in November and every child will be on page 67 of the same book. This is fine, in a sense; everyone learns the same things. But maybe it has something to do with the reason that they have had such difficulty in establishing any stable government in France until the strong man De Gaulle took over. Maybe this can be related to the fact that people have not been taught to think for themselves and therefore must have a father image or strict teacher image in order to hold the country together politically. A series of maybe's, but worth considering.

Young people must read and understand books that have a healthy maturing influence during the adolescent period, whether they be biography, autobiography, or novels, whether it be of the past or the present, before we present *Catcher In The Rye* to them, for instance.

Certainly those of you, especially young teachers, who have recently graduated from college and have studied a lot of "avant-garde" literature are full of it and want to introduce it enthusiastically to the tenth grade. But there are some things that belong beyond the tenth grade, as there are some things that belong in the tenth grade. You can tell me that I'm stuffy if you choose, many people would. But I think that we should recognize that love can be either beautiful or foul, and high school students should learn about love being beautiful before they learn about it being foul. They should learn that man can be noble or a beast. They should learn that freedom can produce responsibility or license. They should learn about the responsibilities of freedom before they learn about the licenses that are taken with freedom. They should learn that tolerance can be honest conviction with respect for other people's convictions, or complete apathy, no conviction, no caring. People call it tolerance—the gray blur of the oyster life in which a percentage of our citizens live intellectually. They don't hate anybody because they don't love anybody. We want them to love, we want them to believe and to care. Only then can they understand that other people can believe differently, love differently and care differently. The person who doesn't do any of this is as gray as an oyster, opening and closing his mouth and perhaps taking in too many martinis. The world is made up of these, but I trust this is not the goal you are setting for your students, although a few may turn out that way!

We need only a handful of people to leaven the loaf, and if you can inspire the attitudes I am talking about in some of your students, you are doing a good job.

I have so far been discussing reading for ideas or pleasure. Reading for fact is, of course, a different thing, and I hope that you are making an effort to teach students that there are different reading speeds for different types of literature. If you are going to read poetry or the Bible, you read at one speed. If you are reading novels you read at another speed. If you are reading biography or books on international relations, or books on ideas, you read at still another speed. If you are reading books for facts again there is a different way of reading. I think the greatest handicap most middle-aged people I know have about reading is they never learned this and they read with dutiful concentration how some knight went out to joust with somebody in the crusades, or how King Henry VIII tore meat apart with his fists, as carefully as they would read something of tremendous importance. Reading speed has to relate to the subject matter.

Also, I personally believe that we should do more memorizing of facts and ideas. I think people have much more capacity to remember things than they use. Many would rather put thoughts on a piece of paper and in a file somewhere, but this is a mistake because they count on looking things up when actually they could have the information quickly available in their minds, and at the proper time.

Let us look, then, at my specific job. School board policies can state the emphasis desired but we cannot guarantee that what the school board says is their policy will happen. That can only happen through the administrators, and basically, through the teacher. However, the teacher, certainly, and the administrators, have a responsibility to know what the school board policies say, what they consider the main emphases. Two years ago in our school system from kindergarten to 12th grade we emphasized vocabulary and written English. We urged every elementary teacher to be certain that when the child answers something in writing, even if the subject is not English (and we found surprisingly that this wasn't happening), that sentences should be capitalized, punctuated and spelled correctly. We found that we had many elementary teachers who, when they were teaching arithmetic, and presenting a problem, didn't care if children spelled the words correctly or capitalized. They didn't care if they put a period at the end of a sentence. This was arithmetic. This wasn't English. All they had to do was get the answer right. Oh, the poor schizophrenic children! How are they supposed to know when they are supposed to capitalize and when they are not? We asked, "In history when they came to Christopher Columbus in 1492, did they have to spell Christopher Columbus right?" Certainly not, 1492 was all that mattered.

Another question before school boards is, how far can any board go in adopting certain textbooks for mature students and count on the teachers to use them in the spirit in which they were adopted? This is one of the reasons that boards are careful, and administrators too, I might add.

The problem that makes us nervous as School Board members is that we are convinced that there are students in our high schools who are ready to move into controversial issues and areas guided by teachers who are themselves sufficiently secure so that they don't feel threatened by a student who wants to consider controversial ideas. But this is not true of all students, and in adopting textbooks, or library books, or magazines which present, not the middle-of-the-road position but a position to the right or to the left, we face the possibility that

it may be misunderstood by a large per cent of the students and by an even larger percentage of their parents. Should we then say, in our schools, that because some people might be disturbed by this literature it should not be available to those who would not be disturbed? Here you see is the question. And as a school board member I don't know the answer. I have seen some of our enthusiastic but immature high school teachers using material that was completely inappropriate to the group of students with whom they were using it. I have also seen other teachers using material that was completely boring to highly capable students who had read much more advanced material at home, during the summer and in other places. This is, in the last analysis, a matter of judgment. This is a matter, again, of the adult feeling a responsibility to use his knowledge, his training, his personal living to assist the student, not to frustrate the student. But how we do this, I am not sure.

I do know that as a School Board member I urge all of our teachers to feel as free as they possibly can to use their own good judgment. I also know as a School Board member that sometimes I don't think they have very good judgment. I regret to say it, but it is true. Do we want to police them and, acting as if none of them had good judgment, play it safe? Certainly not. We would lose all the creativity in teaching and learning. Do we want, on the other hand, to say, "Anybody teach anybody anything? With no interpretation, no background, no evaluation, no guidance?" Certainly not. Here and now, I hand it right back to you. If we can feel that you are able responsibly to use material that is not approved for general use at the present time, the School Board would be sympathetic to your using it, but the burden of proof is on you to prove that it would be rightly used. I don't think we can educate without discussing and exposing young people and older people to different points of view. But I think we have to know when. When is the maturity there? When is the interest there? When have they learned sufficiently that the democratic process means that they should have their own opinions and respect others' opinions? When have they learned that we don't hate people who disagree with us? How do we do this? The teacher who is an inwardly-secure person can allow a discussion to go in many directions. The teacher who is insecure is the one who says, "Let's not get off onto that, that's not what the book said." So, as Board Members, we think about you, the teacher, every time we discuss these objects, the books. The question is not "What kind of books" but "What kind of teachers?"

In conclusion, then: first, never be afraid of ideas and teach your students not to be afraid of ideas, not to be afraid to think, not to be afraid to be different. We need people like that in

America today. Second, help students to develop judgment in evaluating ideas, in evaluating facts, and never to assume facts not in evidence which many books, and radio and television commentators try to make us do. They start right out by saying, "as is well known . . ." Well known to whom? We must develop in ourselves and in others a habit of evaluation and judgment, checking sources, and not taking it for granted that what somebody says is necessarily true but going to another source for further insights.

Finally, as I have said several times because I feel it so strongly, we must develop in America a group of people again, we have had them in the past, with both the courage and the ability to work for things in which they believe. They must have sufficient inner confidence so that they can change their point of view and their opinions if new facts come into the picture. We need people who can come to conclusions, live with their beliefs, work for their convictions and still keep an open mind to other people's points of view. If only we had more people who had open minds to new ideas, who would dare to say, "I thought so once but I may have been wrong. I have now changed my mind!" Too many of us say, "I formed an opinion once and I have never thought about it again. It must still be right." Not at all. Few things are the same as they were ten years ago, and by 1970 half of the facts we know today will no longer be entirely accurate. A growing edge to the mind on the part of the teacher as well as on the part of the student is the fundamental requirement and the fundamental goal of education.

Reading For What?

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I feel that I cannot talk to you about education unless I tell you something about myself, for since I am not in the "education field" but merely a teacher of anthropology, you may be curious about how I come to talk to you about the "field of education," and particularly about reading.

I am sure you all have heard of Margaret Mead, the distinguished anthropologist, and her famous book *Coming of Age In Samoa*. Since, as a graduate student, I studied with her, I was very much influenced by her and by her ideas. It was particularly her emphasis on the relation between culture and the emotional life and between culture and education that attracted me, so that although I did not start my anthropological research specifically in the area of culture and education, there was no doubt that, given her influence, I was bound to find my way into it sooner or later. A generation of cultural anthropologists, or at least that part of it whose ears are not stuffed with the crusty ceremonial language of our discipline, have taken to heart the lesson that culture determines the nature of education, but few of us have been moved to further investigations in the field.

Through the years, starting with my solitary trip to the Kaingang Indians of Brazil, continuing with the expedition of my wife and me to the Pilaga Indians of Argentina, and into my later work in our own culture on the emotional problems of children, I have become more and more convinced that the understanding of the relation between society and the earliest years of life is a critical area of knowledge—an area to which, by the way, the exact and even the biological sciences give no recognition. It is one of the paradoxes of our culture that the best minds are drained by the prestige system away from precisely that area of discovery where, in the long run, the greatest human rewards lie.

Turning now, after this introduction, to the specific subject of my talk. I shall start by saying something about the anthropological approach to the problem of knowledge and learn-

ing. As my talk proceeds you will discover that there is not too much in it that you have not come upon through your own thinking and your own methods, but I draw courage to repeat to you some of the things you already know from the belief that those of you who are dissatisfied with things as they are may find comfort in the discovery that some of the matters to which you object in education are readily visible to serious "outsiders."

When an anthropologist sees a person learning something in a primitive culture he asks himself, "What is he learning it for?" and the answer is usually the obvious one, in order that the person may be able to survive in the culture. Thus, if a boy learns to hunt it is in order that he may become a hunter and live by hunting; and if he learns gardening he will become a primitive farmer and live by farming. There is in such a culture a congruence or complementarity between what a child learns and what he will become. Of course, the whole process of becoming is also clear to a primitive child, for as soon as he is capable of objective knowing he knows what he will become. Thus, on comparing primitive education with our own we see at the outset that while that education is clear ours is beset with ambiguities, for in our culture children do not know what they will become, and the subject matter of elementary school does not determine it. In such a comparison we observe also that in primitive education there is no separation between learning and life. A further striking difference between that education and our own is its openness—its lack of concealment. It is true, of course, that in many primitive societies there are initiation rites during which a boy discovers at last that the "animal" he thought swallowed boys does not exist, or that the beings he thought were gods are only men, but aside from these religious mysteries most primitive societies are open books to children, so that they learn very early about the goodness of people around them and also about their hypocrisy, chicanery and double-dealing if these are present. They learn about the dangers of sorcery, also; and, they learn naturally and easily through observation and conversation, about the perils of war, the pain of childbirth, the pleasures and amusements of sex, and the devastations of disease. Thus very early in their lives, primitive children know the seedy side of the human beings around them as well as their goodness; they know about the pleasures of life and the threats to it. In our society we make massive efforts to conceal whole areas of existence from children and make an elaborate pretense to them that human beings are something different from what they are in reality. In this, of course, our reading material for elementary schools plays an important role, side by side with the home.

If we turn for a moment from these generalities to reading itself we learn that the funda-

mental reading matter of all civilizations has, in the past, been religious. Religion in Indo-European, Sinitic and Hebraic culture has been concerned with life, death and origins; with the relation of man to his gods and to other men. Though fundamental reading matter is no longer religious, it is interesting to reflect that when the Koran, the Bible, the Talmud, and the writings of Confucius and Homer were read by very young children *and* by adults, there was no difference between what was a good book for children and what was a good book for adults. The test of a good book for children must still be whether an adult would enjoy reading it. Even though nowadays religion plays a relatively minor role in our lives it is still possible, nevertheless, to incorporate into a first grade primer human messages of equal importance to children and adults.

Once we realize that in our society there is not only a lack of complementarity between what children learn in school and what they will become, but also that our elementary school readers tend to conceal rather than to reveal the realities of our culture, that our readers are boring to adults and to a great extent divorced from the critical problems of life, death, origins and relationships, we get an idea of why, in many classrooms, the teaching of reading tends to become a problem, perhaps even a burden. Perhaps the only thing that makes it possible for a teacher to go on with the task is the inexhaustible eagerness of the children, renewed each year by the endless variety of childhood. But to the degree that the teaching of reading does become a burden, it must be clear that only when the content itself is a stimulus to the teacher will she no longer have to seek *all* of her rewards in emotional interchange with the children. Perhaps the emphasis nowadays on the importance of the loving teacher is related in part to the boring nature of the subject matter: if the teacher cannot love the subject matter, we seem to say, let her at least love the *subjects*, i.e. the children! At this point we are confronted by another paradox in *elementary* school teaching, for while in the University we demand of teachers of philosophy that they love philosophy, of teachers of physics that they love physics, and of teachers of anthropology that they love anthropology, we do not require that elementary school teachers have the same love for language skills, arithmetic, etc., that the scientist has for his science or the humanist for his art, but demand rather that the elementary school teacher love *children*. I would urge that this emphasis originates in the fact that we do *not* expect our school teachers to love their subject matter, and so, instead, we make it compulsory that they love the children. Only when this antinomy has been removed so that the teacher of reading is in love with his subject matter, because the content of reading is

a joy to both teacher *and* children, will such teaching be completely worthy of a human being, for it will draw on *all* his capabilities.

Because the school learning experience is divorced from the realities of life, contemporary readers tend to be largely meaningless and mindless. Since it is impossible for either the writer of such material or the teacher to have any feeling for it, the writer and the classroom teacher must inevitably communicate to the children their own sense of alienation from the very culture into which the stories are supposed to induct the child. It is education with averted eyes, while looking the other way: there is the same disjunction between writer and teacher on the one hand, and child on the other, as there is between a mother who is singing "Twinkle-twinkle Little Star" to her three-year-old for the thousandth time and is trying to do it with enthusiasm; the only conceivable pleasure the mother can get out of the song is the response of the child, and after the second hundredth singing even *that* may begin to wear thin.

There is, meanwhile, a hairline distinction I would like to make between meaninglessness and mindlessness. A story, let us say a "cute" one like "Archie and the April Fools,"¹ has some meaning, perhaps, in that it depicts giraffes (like Archie) as dear, funny beasts, and Ted and Jim, the two boys he chases up a tree, as impulsive, fun-loving kids, who have a whale of a good time on April Fools Day. But the story is *mindless* because it does not encourage thought. Most of TV has meaning, in this sense, but it is mindless, and, in this sense, much that is in elementary school readers has a terrifying resemblance to TV; aside from patriotic tales elementary school readers and most TV programs tend, for vast stretches, to be merely different dimensions of mindlessness.

The problem here is first of all that we belittle the intelligence of children, thinking they cannot understand; and secondly, that we feel they have somehow to be protected from harsh reality. That feeling, however, is a projection on to our children of our own wish to be sheltered. As far as *understanding* reality is concerned, TV makes the assumption that children can understand anything TV wants them to, and they pitch sales campaigns to children at a level they can comprehend, and even below it. Thus, the school loosens to TV by default.

One of the most important sources of evidence on the capacity of children to think is psychoanalysis, where we learn of the enormous capacity of children to *misunderstand* their surroundings and thus fall ill. But these very misunderstandings show us the enormous capacity that children have to reason and to put things together. Their conclusions are often distorted

¹"Archie and the April Fools," *Story Caravan*; (3² Gr.); Allyn and Bacon, Inc., New York, 1957, pp. 89-105.

not because they do not have the capacity to reason but because they have to work on the equivocal information they are given by society. The power of thought is there, but since their information is spotty or contradictory, children arrive at incorrect conclusions. We must not, however, focus too much on children's capacities for *misunderstanding*—they have great capacity to comprehend the littlest and the greatest things in their environments. Most primitive children know the so-called secrets of life and death by the age of three, and understand the idea of the immortality of souls, because they have heard their parents talk about it, and have heard souls talk, or seen their parents blanche at the sight of an invisible spectre. If children in our society do not understand birth, it is obviously only because birth and its processes have been hidden from them. Nowadays they know about death because they see it every day on TV, they hear their parents talk about cancer and the H-bomb, and they see dead animals. It seems reasonable to suppose that *children* are *more* terrified of death than adults, and that it is more real to them, because they are so small, so powerless, and so ignorant. After reading Adeline Gomberg's notes on children's enactment of death—from the H-bomb, from cancer, from the "bad guys"—in nursery school, I coined the expression the "sensation of imminent dissolution" to cover this childish feeling of closeness to destruction. Ask your little friends or your own children what death is, what it is to die. How can we persist in the illusion that children do not "understand" death when every parent knows that sooner or later his three- or four-year-old will ask him, "Will you die too?"

One might say that often it is not that the child cannot understand at all but rather that he understands too well. The most vigorous denials come from adults often when the child's clear eyes see through shams which compel his parents to deny reality and alienate his Self. Such clarity is also the central threat in all great thinkers. The fear that children may see too much and thus discover that indeed the emperor has no clothes, explains but does not justify our saying they understand nothing, and prompts our efforts to conceal, or to lock children in the contradictions manufactured by our shame and guilt. So it is that by concocting readers that withhold the truth of life from children we capitulate to all that battens on ignorance. This occurs because we live in a *pseudo-veridical* culture, a culture where the ideal of truth is honored more in the breach than in the observance.

There are two kinds of truth and it is only because our language has but one word for truth that these two forms of knowledge are called by the same term. The two kinds of truth are moral and phenomenological truth. Phenomenological truth has to do with problems like

the nature of the atom or of the cell, of outer space; with problems like, what is the population of Denmark or the depth of the ocean off the Bahama Islands? We can even ask, "Is it true that the model of the atom is a core with revolving satellites?" Or "Is it true that the population of Denmark is concentrated largely in Copenhagen?" But it is moral, rather than phenomenological truth that is *the* problem in education. A central difficulty concerning truth in our culture has been that of unpleasant truth. The arguments about truth develop essentially because people do not want to face *unpleasant* truth, and hence the disputes that arise out of unpleasant truths become transmogrified into a fumbling search for truth itself. Much of the time in our quest for truth we are like an old blind man who gropes for his shoes though he has them on. Nobody will become angry or upset if \$10,000 is given to the Society for Crippled Children, but some people might be bothered if they were told that the money was obtained from the operator of the strip-tease joints in town. This dilemma might then lead to a philosophical discussion of the nature of charity, goodness and money, because facing the fact that a corrupt businessman gives \$10,000 to crippled children is too anxiety-provoking. In this way the patent fact that the proprietor of shady joints is taking advantage of the socially irresponsible close-fistedness of the community in order to whitewash his operation by bailing out the public conscience, becomes transmogrified into a debate over "conflicting values." This is an example of what I mean by becoming philosophical instead of facing an unpleasant truth.

In elementary school teaching the central question of our time is whether we can confront children with harsh *moral* truths. Let us not therefore imagine we are teaching children to search for living truths when we merely train them to analyze the physical and biological composition of the universe, for such phenomenology has been removed from the area of contested unpleasantness for centuries, and what was agony for Galileo and Bruno has become a respectable pleasure.

Let me set before you an array of some of the unpleasant matters that might be considered, one way or another, in reading materials for children. I shall do it by asking you to imagine Mr. Jones getting up in the morning and going through the day. He gets out of bed and embraces his wife, who has been up awhile getting breakfast. He tousles the hair of his teenage daughter, Betty, and she asks him for \$5.00 for a special hair-do. Mr. Jones doesn't like the idea, but to avoid a struggle he says he has only enough cash for gas. Thus, Daddy has told a *little* lie, but he has told many like it before. In this case, however, it doesn't make much difference to Betty because she is holding back the change from the twenty Daddy gave her

for clothes the other day. Mr. Jones goes into the bathroom and brushes his teeth with *Checker* tooth paste that promises to shield his teeth from decay. This is a lie. He shaves and uses a lotion because he has been told by lotion advertising that he needs it to prevent infections from shaving. This too is a lie. For breakfast his wife gives him a little slice of ham with his egg, but the ham is about 20% water, having been pumped up by the meat packers.² A loving father and husband, he takes his time about being tender to his family before he leaves. On the job the first person he meets is his superior, Mr. Lyons, a man who knows nothing about the business but who has been hired over Mr. Jones' head because the boss is his uncle. Mr. Jones despises this man, not only because he has the position Mr. Jones considers his, but because Mr. Lyons is humiliating and power-hungry. Yet, Mr. Jones greets him with a cheery "Good-morning, Spike," and stops to chat about the ball game. In his own office Mr. Jones sits down to put the finishing touches on the design for a new package for the detergent his firm makes. This package is larger than the previous one and is marked "economy size," but it contains the same amount of detergent and sells for the same price as the earlier package. Mr. Jones thinks nothing of this, it is part of the game. He buzzes his secretary, Miss Larson, a rather depressed looking, pale girl, with a bad complexion, whom Mr. Jones intends to discharge soon, but he will not tell her this because he doesn't want her to leave until he has another secretary lined up. Miss Larson depresses Mr. Jones, but he is cheerful with her, praises her work, and she adores him.

Let us stop here, for sufficient unto Mr. Jones' day is the evil thereof. We see that Mr. Jones, a product of his culture, lives amid lies while he creates them himself. From this we derive a simple lesson that he who lives amid lies must create them himself—he lies to others and to himself. How can we convey unpleasant truths like this to children? Indeed, should we, or should we continue to accept as part of life the disillusionment our children experience as they grow older? And shall we accept the disintegration of the adolescent conscience as he becomes socialized by his peers to the corrupt culture?

The failure to discuss the Jones problem, and, indeed, any of the unpleasant realities of our culture stems, of course, from our guilt about *them* and about *ourselves*. From such guilt comes the fact that readers that deal with *unreality* are welcomed by state and municipal departments of education and by teachers. In the psychodynamic view contemporary readers are symptoms of adult guilt. As Fromm might say, they are expressive of a culturally patterned defect. We can

²"The Great Ham Robbery," *Consumer Reports*, V. 26, No. 3, (March 1961), pp. 120-125.

now understand more completely the difference between education in our own and in primitive society, for while in the latter there is an unbroken line between what the child learns and what he shall practice as an adult, in our society we dig an abyss between child education and adult life. Actually I should say that we *try* to create the abyss, for children often perceive that the world is not as adults would like to have them see it. The first perception of this deceit marks the beginning of distrust of adults, with the eventual turning away from them at adolescence. It is a rather terrifying paradox that in a culture like ours with a strong prophetic strain in which passionately angry exposure and denunciation of hypocrisy is coupled with love of goodness, we put blinders on our children while we proclaim to them that the world is good. When they discover that it is not, they turn from us, but, paradoxically again, not so much because they feel they have been misled, but because, since they have become socialized to their parents' corrupt world, they fear discovery within themselves of the very disease that blights their elders. Perhaps the most dramatic expression of our guilt about and rejection of our culture is the circumstance that the overwhelming bulk of *stories* in elementary school readers occurs in rural surroundings, though the overwhelming bulk of our *children* live in urban areas. Why do we reject the city if it is not that cities stand for everything we dislike about our culture while the green country-side symbolizes the freshness, the constant growth, and the natural spontaneity we feel we have lost?

I would like to turn now from these general considerations to the content of some new readers. These books have covers that remind one very much of the neon-lit streets of Las Vegas. The commercial gaudiness and the miserable illustrations on the covers suggest the nature of the intellectual content within. But first some generalities: The stories are characterized by displacement of the nuclear family: often the children live with grandparents or others than their true parents, and usually the dramatic focus revolves around situations outside the nuclear family. Fathers, and adult males in general, are regularly portrayed as scoffing, callous, and even cruel; they regularly underestimate their children and brush them off; and they make wrong decisions. Typical of this genre is the King in the story of "The Purple Horse,"³ and Mr. Ketonen and Mr. Olavsson in the story "Hank the Moose."⁴ Adult males most often achieve dignity in tales of culture-heroes like George Washington, Daniel Boone, and Cyrus Eaton, but such stories are a minority, and such heroes are so far beyond most of our children, it is questionable what impression they make.

³"The Purple Horse," *Story Caravan*, pp. 49-59.

⁴"Hank, the Moose," *Believe and Make-Believe*; (4th Gr.); Allyn and Bacon, Inc., New York, 1957, pp. 29-38.

But such distortions of relations between parents and children, and the nature of human living that I have mentioned are still relatively minor, though rather serious confabulations to be sure, when compared to the general oceanic unreality of the stories. These unrealities appear not only in the content but extend also to particular forms of bizarre ideation.

For example, there is the story "Archie and the April Fools"⁵ in which a giraffe, called Archie, escapes from the zoo, gets into Jim and Ted's neat suburban backyard and starts to eat the foliage. Characteristically, no parents are around, and Jim and Ted are treed by the animal, but not before they have called the zoo to inform about the giraffe. They then collect a reward of \$25 for capturing the animal, after having lied to the zoo employees about how they happen to be up in the tree. The story ends with a disagreement between Jim and Ted about how the money shall be spent. Another story is that of Anya, a little foreign girl in the story "Valentines for America,"⁶ who is laughed at by the children because of her strange speech, but who stops the laughter once by giving them valentine cookies baked by her mother. In "The Country Bunny and the Little Gold Shoes"⁷ we are in that never-never land of bunnies that is eternally manufactured by adults for children. Here a mother bunny (with no father around, of course) somehow, half walking, half flying, brings an Easter egg to a sick child, a deed for which she is rewarded by a pair of golden shoes by a kind and wise grandfather bunny. In what his kindness and wisdom consist is never revealed. In "Miss Crumpet's Great Day"⁸ (note that this woman is unmarried), a lively and alert little woman with white hair but the face of a three-year-old is helplessly in tears because she will not be able to see the coronation parade, but she is saved from this catastrophe by Professor Beep, a disoriented combination of scientist, and "circus strong man," who performs a piece of business that is well worth the telling. Professor Beep has a pair of magic boots that bounce him up in the air like a kangaroo. He gets an armchair, puts Miss Crumpet in it, puts her and the chair on his shoulders, and, through his bouncing in the air with her she is enabled to see the parade. He also makes some money by renting out himself and the chair.

In a fourth-year reader there are a number of hero stories in which American soldiers and Indians are brave, and in which appear Washington, Boone, Cyrus Eaton, the Wright Brothers,⁹

⁵"Archie and the April Fools," *Story Caravan*; pp. 89-105.

⁶"Valentines For America," *Ibid.*, pp. 78-88.

⁷"The Country Bunny and the Little Gold Shoes," *Ibid.*, pp. 106-120.

⁸"Miss Crumpet's Great Day," *Ibid.*, pp. 124-142.

⁹"Daniel Boone Leads The Way," pp. 129-135; "Tony Takes a Chance," pp. 136-144; "Cyrus' Wonderful Invention," pp. 145-148; "The Flying Machine," pp. 155-164; *Believe and Make Believe*.

etc., the great expressions of American nationalism, patriotism, and material idealism. There is also a "funny" tale of an animal that is not where it should be,¹⁰ but here in the fourth year it is a moose and not a giraffe. There is the usual routine in which the child discovers the animal. However, he is disbelieved by a brusque, callous father, who then wants to have the animal killed. In attempting to get the animal out of the man's stable, where there are 21 horses, by the way, the whole town, from the stupid policeman to the mayor and the board of aldermen, gets involved, but in the end the moose wanders away, and so is saved from the cruel adults. Only the children were worried about killing it.

In the same book is the story of "Polly Patchwork"¹¹ where Polly has to wear to a town spelling contest a dress made of an old patchwork quilt by her grandmother, with whom she lives. Polly is embarrassed before all the children, the teachers, and the town dignitaries, but she wins the contest because the dress itself reminds her of how to spell the crucial word, Mississippi.

I will examine a few of these stories from the ideological and moral points of view and then go on to a reader published just after the Civil War.

Let us consider first the story of Anya and the valentine cookies. This is a story about a little immigrant girl who is regularly laughed at by her classmates because she speaks peculiarly and says "Thank you, please" instead of "thank you." Because on Valentine's Day Anya brings cookies for all the children, the teacher smiles and says to her, "You must tell your mother and father how glad we are to have such fine new Americans in our country." Tears of happiness came into Anya's eyes. 'Oh, thank you, please,' she said. But none of the children laughed this time. *They were much too busy eating Anya's valentines for America.*" (Italics added.)¹²

I would like now to call your attention to the cultural, ethical, and ideational problems raised by this story. In the first place, there is no suggestion in the instruction to teachers in the front of the book that the propriety of laughing at the mistakes of others be explored. Since my students and I have spent years observing reading lessons and have rarely heard a moral issue explored by a teacher, there is no reason for assuming that a teacher, harassed by time and curriculum, will raise the problem unless directed to do so. In the second place it will be noticed that Anya and her family are congratulated on their Americanism on

¹⁰"Hank, the Moose," *Ibid.*, pp. 29-38.

¹¹"The Story of Polly Patchwork," *Ibid.*, pp. 169-179.

¹²"Valentines For America," *Story Caravan*, p. 88.

the grounds of Anya's having brought cookies to school. This expresses our characteristic consumer orientation. Thirdly, it is recorded that the children did not laugh at Anya when she said "Thank you, please" this time, only because they were too busy eating, not because they felt ashamed or even grateful. As a matter of fact, with characteristic culturally determined precision, the story does not even mention the reaction of the children to the gift. And finally, in complete opposition to nineteenth-century readers, the children are not punished or even criticized for humiliating behavior.

Meanwhile, there is a cognitive as well as moral problem involved in this story. The cognitive issue revolves around the lack of congruence between laughter and the reason for later *failure* to laugh. Incongruity is an important dimension of humor, and I presume that failing to laugh because the face is stuffed with cookie is a funny idea to children. But in terms of the moral *expectancies* of the story, such a reason for not laughing is beside the point and bizarre. A normal, rather than bizarre reason would be a feeling of embarrassment that they had laughed at such a nice girl. The children who read this story can learn nothing from it: without *discussion* it is a mindless story out of which each child can take whatever his personality determines.

In the story of "Miss Crumpet's Great Day"¹³ I am in territory that is particularly meaningful to me because the most important character in the story is Professor Beep. The name Beep reminds one, of course, of a ludicrous sound. In the picture of Professor Beep he is dressed in a rather clownish costume—circus-like blue suit and a tall brown hat. He wears square glasses and although he has a ruff of white hair around the edge of a bald crown, he has the face of a third-grade child. He is described as an inventor, and a "strong man in the circus." He has an enormously inflated opinion of himself, and boasts that he can do anything. He is also rather silly, and he cannot remember very well where he has been at one time or another. This creature is kind, however, and offers to help poor Miss Crumpet see the coronation parade; with the outcome already described.

When we look at this story from the standpoint of its morality and the picture it gives of motivations, and of scientists, we notice at the outset that this white-haired Miss Crumpet with the face on an infant, is inconsolable because she cannot see the coronation parade. In the story of "The Purple Horse," it will be remembered, a little princess fell ill out of inconsolable grief because she could not have a purple horse. Thus, the source of *inconsolable grief* is

¹³"Miss Crumpet's Great Day," *Ibid.*, pp. 124-142.

regularly presented as stemming from unfulfilled trivial desires whose emotional charge is out of all proportion to the objective significance of the desired goal. While it is true that real children often suffer exaggerated torments from similar frustrations, it is inappropriate for formal education to reinforce the process. It is also true that fairy tales sometimes present the same theme. This fact does not sanctify it, however, and in the present context the misery of Miss Crumpet merely validates adult childishness.

If we turn now to the professor, we see that the conception of the scientist as a mixture of magical power, childishness, and imbecility reinforces the uncomplimentary idea many people in this country have of scientists. To present this image to children, some of whom we expect someday to be scientists, is paradoxical indeed, and reflects, perhaps, the fear that many educators themselves have of scientists.

You will already have observed that all of these stories have the "gimmicky" characteristics of comic books and movies. The most important element in comic book stories of all kinds is what is known in the trade as the "gimmick"—a special idea, like *Superman's* X-ray vision, for example—that will give the story originality and capture children's interest, and the stories in the readers are often of this cast. Perhaps the best proof of gimmickiness is the fact that Professor Beep and his bouncing shoes, made of a special substance discovered by him, have been made into the new Walt Disney movie, "The Absent-Minded Professor." In this picture Professor Brainard discovers "flubber," a substance which, if placed on the shoes of basketball players, permits them to jump high in the air or, if placed in the engine of an old Model-T Ford, enables it to take off and fly. Flubber: flying rubber. Get it? That is the gimmick in this film.¹⁴ Just as Professor Beep saves poor Miss Crumpet from distress at not being able to see the parade, Professor Brainard (Brain-hard: Get it?) saves the college from athletic humiliation and financial ruin. One more story from a fourth-grade reader will illustrate further the gimmick in school readers. In "Polly Patchwork," typically a story of a grandmother and one of those chronically parentless, story-book, rubber-stamp children, the woman, without consulting the child, decides to make her a dress of an old patchwork quilt, and Polly, in spite of mortification and fear of what the children in school will say and do, does not utter a word. In school Polly's humiliated and embarrassed because of her ridiculous dress, and the children make fun of her in a song. It happens, however, that in this dress there is a patch from one of silk imported from Paris, and worn long ago by Polly's southern cousin, Mariana Gay, who "used

¹⁴NEW YORK TIMES, March 17, 1961.

to sit on her porch, watching the boats go up and down the Mississippi River, and sing *Listen to the Mocking Bird!*"¹⁵ (Note the poor English construction.) In the spelling match when all the other children have failed to spell Mississippi, Polly looks down at the patch, has a vision of Mariana sitting on her porch singing, prays to her to help her spell Mississippi, gets it right and wins the match and medal.

The story strongly implies that it was Polly's capacity to bear humiliation that made it possible for her to triumph. Perhaps this tells a childish reader that whoever bears humiliation will win through to glory. But whatever the message, it is clear that there is no connection between winning a real spelling bee and an extraneous capacity like bearing humiliation silently. Spelling bees are not won by magic but by really knowing how to spell! It is not only true that in order for us to have sane children punishments must fit crimes, but it is true also that rewards must be congruent with endeavors—there must, in the interests of simple sanity, be some connection between real and storied trials and accomplishments. In order for a story to be at least *rational* either a little girl should get a beautiful new *dress* for having suffered the patchwork one in silence, or she should win a spelling contest because although dull, she studies hard. But winning a spelling contest as a consequence of wearing an ugly dress can occur only in the schizoid cosmos of writers of commercialized, *pseudo*-educational stories for children.

Possibly the writer of this story meant it to emphasize the lack of relevance of clothes to accomplishments; but this is an orientation that is unreal in *readers* where the illustrations, the non-verbal messages, portray only clean, well-dressed children, and in a *culture* where success is related to clothes. Actually, however, there is no follow-through on the implied moral issue in the instructions to teachers. Many who read this story, on the other hand, will feel Polly's humiliation and silently hope it never happens to them. There is no follow-through furthermore, on the problem of Polly's humiliation, the jeering song of the children, etc. Thus the ideation is bizarre and Polly's emotional problem is not dealt with in the manual. This combination, of bizarre ideation and failure to deal with a child's emotional problem, is one of the features of family psychopathogenesis. It is hard to imagine what the contents of this story could accomplish in a positive way, except, perhaps, to make little readers wish harder than ever to have clothes like everybody else and to hope that if they get stuck in a spelling bee their clothes will talk to *them*!

¹⁵"Polly Patchwork," *Believe and Make Believe*, p. 173.

"The Peddler's Clock,"¹⁶ a really good story, and the last one I shall discuss from contemporary readers, actually has *two real parents!* Characteristically, however, the father is portrayed as an insensitive ogre:

Miles, Jim, and Timothy Bell needed no clock to tell them when it was time to bring the cows home. *It would have done them no good to wish for one either. Father did not want a clock in the house. He was too proud of the big silver watch his own father had bought many years ago.* (Italics supplied.)

In this family there is a conflict between father and mother, because father has bought more cows than the family needs but has refused to buy his wife a clock in spite of her hunger for one: ". . . a clock is just an ornament" says Farmer Bell; it is "silly." On the other hand, Elizabeth, his wife, never felt that Muley, the last cow he bought, should have been acquired at all. As a matter of fact, Father is opposed by almost the entire family. One day when he is away on business a peddler appears with a beautiful clock and with the connivance of Grandma, Mrs. Bell trades Muley for it. Since Muley is little Timothy's pet he is in tears over the loss.

When Father comes home he is infuriated and the household becomes gloomy. Meanwhile, alone with his father in the barn. Timothy tells him that the trade ". . . was a bad piece of bargaining, too. The cow's worth lots more than the clock." Silently, telling no one of his plans, Farmer Bell then rides off and returns in the evening with Muley.

"Father!" cried Timothy. "How did you get her back?" "I went to Ebenezer Plump's shop and paid the man what the clock was worth."

Father ate a big supper that evening. He got up from the table and stretched. Then he said, "That's a handsome clock, Elizabeth, very handsome! It wasn't very expensive, either. Next winter I will build you a new shelf for it. How would you like that?" "I'd like it very much, Jonathan."

Mother and Father smiled at each other. Suddenly it seemed as if the whole house were filled with sunshine. The children began to laugh and chatter. Grandmother's face was full of happiness.

There is no particular reason why the pigheadedness, blind adherence to one's own opinion, and a characteristic American paternal weakness of being unable to yield, should not be portrayed in a story for third-graders. The great difficulty of these books, however, is that they often do not seem to have any *other* message: they are the text-book validation of the *Dagwood* view of American fatherhood. There are, meanwhile, a variety of interesting subtleties in this

¹⁶"The Peddler's Clock," *Story Caravan*, pp. 6-24.

story that ought to be explored. The family is in conflict over a clock—a piece of consumer goods—and one of the children is reduced to tears, while the entire household is almost unable to breathe when, on coming home, Father finds the cow gone and a clock in its place. Thus, the family is riven by a quarrel over a trifle. While it is true that some real families become disorganized over trivial consumption matters, while it is true also that some husbands leave their wives at home with no money while they are away, while it is true that some wives will do behind their husband's backs what they are too frightened to do when he is around, and while, finally, it is also true that some parents and spouses tend to be unaware of human sensitivities, there are no indications in the teacher's manual that these truths are to be explored with the children. That is to say, even when a story does, like this one, bear a resemblance to life, the directions for the teachers do not bring out the issues. The point I wish to make is that while an alert teacher may, if she chooses, examine the moral implications of this tale, the discussion is not *prescribed* nor even suggested. In an education that was truly oriented toward morality, such examination would not be left to chance: the discussion of morality would be just as compulsory as the discussion of the meaning of the words. But the former has fallen away because today's elementary school has a stomach too squeamish for morals. Morals have become indigestible to contemporary education.

Continuing now with the discussion of the story, I would like to draw attention to the family dynamics. The father is portrayed in opposition to the wife, grandmother and all the children except Timothy who, deeply hurt by his mother's decision, and unwilling to express himself openly, goes behind her back and tells his father about his feelings in secret. But he does not tell the truth, for he does not say, "Mother hurt me terribly by trading Muley," but rather puts his objections to the transaction on grounds more likely to be acceptable to his father. The family has thus been split into two coalitions: Father and Timothy in one and the rest of the family in the other. The danger to family harmony, however, is removed by Father's buying back the cow, so everybody ends up with what he wants: Father and Timothy have the cow, and Mother has the clock. Since in conflicts over possessions the ideal for children of the age who will read this story is not that the issue be decided equitably but rather that everybody should get what he wants, the "Peddler's Clock" provides a truly juvenile solution to a family problem.

It will be interesting now to turn to a Horatio Alger story printed in Richard Edward's

*Analytical Fourth Reader*¹⁷ in 1867. The story, "How Johnny Bought A Sewing Machine," tells how a poor boy, whose father was killed in the Civil War, works, picking cranberries, in order to buy his widowed mother a sewing machine. *Although Johnny works very hard he is not able to save enough money to buy the machine.* One day he saves a little girl from drowning, and her wealthy father, Mr. Barclay, gives him a reward of \$100. When, however, Mr. Barclay discovers that Johnny intends to spend the money on a sewing machine, he buys it and then sends Johnny a second \$100 and a promise to give him a job when he is older. Now it is interesting that this typical Horatio Alger story, in which money is achieved not by hard work but by a freak of fortune, is handled sceptically and analytically in the questions that follow it. Examples are: "Is it right for a man to leave his wife and children and go to war? Is it honorable to pay people less for their work than it is worth? Is it easy for a boy to be as industrious as Johnny seems to have been? Is it best to depend much upon doing great things, such as saving this little girl? Which do you think was the more praiseworthy in Johnny, to save the little girl, or to be, every day, obedient to his mother, and industrious? Which needs the more care and self-denial? Which can every boy and girl do?" The point at issue here is that the moral implications of the story are examined in great detail, and the phantasy of rags-to-riches-through-a-gimmick is critically evaluated. What I miss in contemporary elementary school readers is an effort to evaluate anything.

In closing I shall quote from the review in the NEW YORK TIMES of a new book on advertising by Rosser Reeves entitled, realistically enough, *Reality in Advertising*. Mr. Reeves is chairman of Ted Bates & Co., a successful advertising agency. The review states:

... Mr. Reeves portrays the consumer's mind as a series of boxes marked soap, headache remedies, refrigerators, cigarettes, candy bars. There is only so much room in each box, Mr. Reeves says. It is the job of each advertiser to try to cram his message into that box ... The heroes of Mr. Reeves' book are the Anacin commercials that divide a man's head into three parts, slogans such as "Do you have tired blood?" or "Stop Halitosis" and the invisible shield that is supposed to keep teeth from decaying. Repeat this type of commercial over and over again, Mr. Reeves says, and the competitor's message will be squeezed out of the box ...

Fill the little boxes in his head properly, Mr. Reeves says, and the consumer will respond the way the advertiser wants him to respond.¹⁸

¹⁷Chicago, George W. Sherwood Co., 1867.

¹⁸See "The 'rags to riches story': an episode of secular idealism" by R. Richard Wohl, in *Class, Status and Power*, edited by Reinhard Bendix and Seymour Martin Lipset. 1953. The Free Press, Glencoe, Ill.

¹⁸NEW YORK TIMES, March 26, 1961.

This too is brainwashing! The reviewer is anxiously deprecatory of this book because Mr. Reeves has transgressed respectability by calling a spade a spade. The problem for us, however, is that such advertising as Mr. Reeves admires can flourish only in a culture where children have, early in their lives, been robbed of the capacity to *evaluate*. Or let us put it the other way round—where their innate human potentialities for evaluation have never been developed. The question before *you*, the question before us all, is “Do we want this state of affairs to continue?”



Reading in the Reorganized Elementary School

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SOME STRUCTURAL PROBLEMS AND ISSUES

Schools are organized vertically and horizontally to serve two different administrative functions: (1) the movement of learners upward through the program; (2) the allotment of kinds and numbers of learners to available teachers and programs in the several divisions of the curriculum. Thus, the educational enterprise is organized vertically into primary, elementary and junior and senior high schools, and junior colleges, colleges and graduate schools. These units are subdivided, in turn, into grades at the lower levels and years at the higher levels. Similarly, the educational enterprise is organized horizontally into classes, usually of 25 to 40 in elementary and secondary schools and of more variable numbers in colleges and universities. To accompany these structural units, buildings are constructed egg-crate style, providing 750 to 1200 square feet per room for elementary and secondary schools and only slightly more space variability for collegiate institutions.

Traditionally, adjustments of student placement in the vertical scheme of organization have been effected through retention of the learner for an additional year (nonpromotion) or through acceleration (usually grade-skipping). These alternatives virtually exhaust the possibilities for re-assigning students in the graded scheme. They represent attempts to adjust the learner to the school's organizational framework.

There have been more alternatives for horizontal adjustments in pupil placement. Commonly, in the elementary school, groups which are homogeneous in chronological age are brought together in classes where they are found to be quite heterogeneous in achievement. Inter-class groups are established, too, in order to bring about homogeneity in achievement, ability, interest,

or some other factor. Groups that are homogeneous for any one factor usually remain quite heterogeneous in other factors.

These traditional patterns of school structure and pupil placement are now being subjected to widespread critical scrutiny and modification. The scrutiny is of a deductive rather than a research character. And the modifications are of a "best judgment" variety involving much trial-and-error.

Thoughtful re-appraisal of long-standing arrangements in school organization is based on considerations such as the following:

1. Studies into the effects of nonpromotion—a major adjustment mechanism of graded schools—conducted for a half-century show no advantages for retained children in regard to achievement, social acceptance by peers or personal adjustment. In fact, the evidence is in favor of promotion as the more advantageous practice.
2. Studies into trait-variability reveal striking inter-individual and intra-individual differences. In the usual heterogeneous age-grade class, the overall spread in achievement is as many years as the number of the grade level: four years in the fourth grade, five years in the fifth, six in the sixth, and so on. Only three or four children in each class are at grade-level in all subjects at mid-year. The balance score above and below grade-level in various subjects, sometimes many grades above or below. A "fifth-grade" child is merely one who happens to be assigned to "the fifth grade."
3. "Minimum essentials" defined according to grade-level specifications is a stultifying concept. The easy attainment of such standards by the academically-gifted encourages a false sense of accomplishment, perhaps even slothfulness and over-inflated egos. The unattainability of such standards by the slow-learner encourages a sense of futility, perhaps even of personal failure and worthlessness. Some 25 per cent of our student population receives as much as 80 per cent of class and school failure. Such a condition could hardly be described as an equitable distribution of success and failure.
4. There are periodic upheavals of humanitarianism which direct suspicion to heavily subject-oriented concepts of school function. At present in the United States, however, many educators and parents alike appear, frequently, to be equating more and more, harder and harder, faster and faster with better and better. They tend to look favorably on changes in school practice that permit students to move ahead more rapidly, unimpeded by the progress of slower pupils.

5. From time to time, we develop suspicions about whether or not subject-matter learnings are slighted in self-contained classrooms. Once such suspicions are thoroughly aroused, departmentalization appears again as antidote. The current search for structure in the various fields of knowledge is being accompanied by a downward extension of emphasis on such subjects as geometry, algebra, physics and logic. These developments, in turn, appear related to demands for more subject-matter preparation on the part of teachers.

6. There are persons who believe that the job of the teacher—especially the elementary-school teacher—is impossible. They propose school arrangements and personnel allocations designed, presumably, to simplify the teacher's task.

Foreign visitors comment on what they perceive to be an American propensity to seek structural panaceas for instructional problems. The Pueblo Plan, the Gary Plan, the Platoon System, the Dalton and Winnetka Plans have come and gone. In 1961, we are going around the clock again with ability groups, accelerated groups, homogeneous groups and homogenized groups but we don't yet know how to tell the time.

PROPOSALS FOR REORGANIZATION AND THE READING PROGRAM

Two plans, each with several variations, for reorganizing school structure currently are receiving considerable attention. Nongrading—sometimes incompletely referred to as the ungraded primary—is designed to modify the vertical lock-step. Team teaching (or cooperative or associated teaching) is designed to modify the horizontal egg crate. Because of the variety of plans in operation, it is advisable to refrain from describing any one plan for fear of confusing a class of phenomena with a single example. In brief, nongrading may be defined as the removal of grade labels and barriers from two or more conventional grades; team teaching as the cooperative pooling of resources by two or more teachers.¹

Nongrading and team or cooperative teaching, as proposals for structural reform, have potentiality for affecting the reading program in two, basically different, ways. Nongrading offers opportunity for removing grade-level *prescriptions* of learnings and materials as *standard* for all and substituting a wide range of expectancy in traditional "grades." The words, "offers the opportunity" are significant. If grade labels are removed but the opportunity for removing

¹Schools seeking to build a hierarchy of personnel working together wish to restrict the term "team teaching" to these efforts. "Cooperative teaching," therefore, is a more accurate term for the joint teaching plans described in this paper.

expectancy prescriptions is ignored, then we still have a graded school, whatever the name applied to it. Similarly, team teaching offers the opportunity, among others, for greater flexibility and variety in grouping. But, if pupils are merely re-allocated to teachers according to accomplishment in reading and re-arranged for arithmetic and then for spelling or social studies, we simply have departmentalization, whatever the label applied. Nongrading, then, has potentiality for affecting the vertical organization of the reading curriculum; team teaching for affecting the horizontal allocation of teachers to groups of learners.

Reading and Nongrading

The central, vertical problem in designating the reading program is that of determining the bases of pupil progression. Learners must move upward by means of *something*. The need to designate this something in a nongraded plan has led to a description of levels of difficulty through which learners are to progress. Thus, some school systems have designated 8, 12, 20, or even 32 "reading levels" defined according to expected reading accomplishment for each level. The manner of designating these levels varies. Sometimes, kinds of pupil accomplishments are described; sometimes, kinds of materials which ought to be within the reading range of the child are defined. Kinds of materials usually are equated with the reading series of a publishing house.

The above approach to curriculum organization reflects a conception of individual differences and school function that is not acceptable to all educators. The basic provision for individual differences here is differentiated rates of progress through learning prescriptions common to all. The concept of function is that schools are to provide such a set of prescriptions. But, some educators claim that learnings should be differentiated in *kind* as well as *degree*, even within a category such as reading, and that the developmental progression of learners in reading skills does not always proceed according to an arbitrary, pre-determined sequence. Nonetheless, the encouragement of individual rates of progression is a significant move forward from the graded lock-step.

One might argue that good teachers in graded schools provide for such differentiation. In part, they do. But the differentiation in a specific activity such as the selection of materials leaves much still to be desired. Poor readers usually are using at the end of the year what good readers used at the beginning. In other words, a year's spread in difficulty of reading materials is provided. But the spread of reading accomplishment in a graded class usually is from one and

one-half to two times the number of the grade level. A range of difficulty in reading material should be provided accordingly.

The "reading levels" approach to the longitudinal arrangement of the reading program in a nongraded school is a step forward—provided the levels do not become an arbitrary set of hurdles. When this occurs, the so-called "nongraded school" becomes only a graded school, with 12 or 32 reading levels replacing 3, 6 or 8 grades. Some school leaders, fearing the levels plan as merely a graded school under a new name, seek more fundamental designation of vertical threads around which a variety of learning opportunities may be organized. Under such a scheme, teachers pay less attention to the progression of books in a reading series and more attention to the skills which the books, presumably, are designed to develop.

This approach transfers emphasis from the progression of materials or activities to the progression of pupil competencies, with certain salutary outcomes. Teacher attention is directed to the child and appropriate next steps for him, rather than to the mere fact of his gross successes and failures. The teacher retains a mental picture of what developmental success in reading looks like, a picture that is useful in diagnosing and remedying reading disabilities. Such an approach tends to avoid both the prescription of arbitrary requirements and meaningless comparisons of more with less able pupils.

Marked differences in school practice exist under the label, "nongraded." The removal of grade labels and grade expectancies creates opportunities for but does not assure continuous and flexible pupil progress through sequential curricular arrangements or, for that matter, does not insure any educational changes whatsoever. The ways in which educators utilize these opportunities, not the mere absence of grade labels, differentiate between graded and nongraded schools.

Reading and Team Teaching

The central, horizontal problems of assigning pupils to teachers have to do with pupil-teacher ratios, curricular bases of pupil distribution, ease and frequency of redistributing learners for instruction, and determining the character of instructional groups. Current team teaching efforts, for the most part, question the validity of the traditional 30 to 1 pupil-teacher ratio; seek to acquire the strengths but avoid the weaknesses of both departmentalization and the self-contained classroom; and strive for flexibility in pupil grouping in line with educational interest. But not all team-teaching efforts possess or even seek to possess these traits.

Intra-individual differences provide one set of motivations for team teaching. Within a

given child, the range of achievement from subject area to subject area often is marked, approximating the range in overall, average achievement of the class group. Consequently, grouping children homogeneously on a criterion of general ability or average achievement produces groups within which there are still marked inter-individual differences. Likewise, grouping children homogeneously on a criterion of specific achievement such as reading produces groups which are heterogeneous in all other areas of achievement. To group and re-group children from teacher to teacher and room to room in order to achieve high-level homogeneity in the subject being taught at a given time creates acute organizational problems, may threaten curricular unity and, according to some psychologists, impedes the development of group cohesion and pupil identification with a stable group.

Cooperative teaching plans usually enlarge but sharply define the boundaries of the group within which pupil-teacher interaction and pupil-pupil interaction is to take place. Thus, there is greater flexibility for grouping than exists in the self-contained classroom but not the excessive mobility found when class groups are established departmentally and homogeneously. In team teaching, the self-contained concept can be extended to encompass a "class" of 90 or 150 students. These students constitute a "family" within which almost unlimited grouping and re-grouping may occur. An essential difference between this arrangement and any of the common forms of departmentalization is that *all* teachers assigned to the total group engage in *all* the planning for education, working together in a variety of ways for the actual conduct of the enterprise.

Let us visualize, for example, a simple cooperative teaching arrangement involving three teachers and three third-grade classes. Under usual procedures, reading in each room probably would be conducted in three groups, an A and a B and a C group in each of the three rooms. Thus, there are 3 A groups, 3 B groups and 3 C groups, with the range in reading achievement in each cluster being approximately equivalent. Under the cooperative teaching plan, the three classes embracing perhaps 100 children are viewed as a single class to be subdivided in any number of ways. It would be helpful if moveable partitions separated the three rooms, but simply cutting a doorway in intervening walls contributes materially to space flexibility (or malleability, in the architect's terminology).

These 100 children are arranged and re-arranged to provide, when appropriate, homogeneity of interest, of ability, of achievement, of learning disability, or any of the other traits, according to the purpose of activities underway. For reading they might be divided into five groups,

each of which would be more homogeneous than any one of the nine groups set up under the conventional arrangement described in the paragraph above. Thus, there would be three teachers for five rather than nine instructional groups. Or, most of the children might be arranged in the five groups with two teachers while the third teacher, perhaps specialized in clinical reading techniques, worked with a special group of youngsters presenting common reading problems. Many such examples of unique grouping arrangements might be described.

Teachers working in these and comparable team teaching arrangements claim time-saving advantages in effecting the transition from group activity to group activity. They like the opportunity of conferring together over the unique problems of individuals. Likewise, joint diagnoses and prognoses of selected children are carried effectively into parent-teacher conferences. Above all, they appreciate the opportunity of conferring with colleagues throughout the working day over problems which, normally, would be individual, lonely preoccupations in the conventional classroom cell.

Like nongrading, team teaching only creates opportunities; it does not, by itself, change instructional practice. Consequently, a wide range of practices—some promising, some questionable—go on under the label, "team teaching." Combine the division of labor possibilities with separation of the subject-fields and departmentalization may be the result. Overdo the opportunities for large group instruction and mechanistic recitation may be the common mode of teaching. No pattern of school organization is able to withstand human excess. Before condemning a given pattern, we should look carefully into the insights and techniques of those acting in its name.

IN CONCLUSION

The preceding discussion has sought to separate nongrading and team teaching as proposed solutions to two quite different sets of organizational problems. The former is proposed to alleviate certain difficulties of advancing pupils through a vertical structure; the latter to facilitate assignment of learners to teachers and instructional groups. One can proceed without the other. However, many advocates of educational reform link the two, claiming for team teaching and nongrading in combination the creation of far more opportunities for educational reform than either can provide alone.

It is too early to know the full value of such organizational proposals. Practices following from nongrading have not yet been adequately differentiated from practices following from grading. Consequently, we have no model types to compare experimentally. And so comparisons

of so-called nongraded schools with graded schools may be nothing more than comparisons of graded schools called "nongraded" with graded schools. Furthermore, because nongrading is being used as the organizational framework by a variety of schools that differ markedly in their concept of function and view of individual differences, practices differ widely in schools labelled nongraded. As in the past, we justify a given structure on the basis of its perceived "fit" with the kind of curriculum and instructional practices we seek.

In applying nongrading or team teaching to the reading program or any other area of teaching and learning, there is always the danger of confusing form with substance. Not nongrading, not team teaching, not any other kind of structured arrangement by itself effects substantive program changes. But such devices do, indeed, block or facilitate a wide range of curricular and instructional procedures, making it easier or more difficult for creative teachers to achieve their ends. It is my personal belief that nongrading and team teaching are natural corollaries of some long-needed changes in the teaching of reading.

Organizational Schemes and the Improvement of Reading Instruction

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One of the primary objectives of new organizational schemes utilized by elementary schools is the improvement of instruction with a stated or implied emphasis on the improvement of the teaching of reading. Therefore, one interested in the improvement of reading instruction has only to scan the available literature to find a multitude of organizational schemes, each promising improvement over the traditional method of teaching. Yet, with all these schemes, the teaching of reading has not undergone major revision in the past 25 years. Schools experiment in a limited fashion with a new organizational scheme and then return to past practices. Many of these schemes are successful for the experimental teachers, but not for all teachers. There is no doubt that a dedicated, highly motivated teacher can make most reasonable schemes work, while teachers not fully committed can meet with a notable lack of success.

Assuming that a school were composed of highly motivated, intelligent teachers who wished to improve reading instruction, is there an organizational scheme which will allow maximum development of each pupil in reading skills?

Before any attempt is made to answer this question, it seems necessary to list the major organizational schemes utilized at the present time for the improvement of instruction. Some of the underlying assumptions for each organizational scheme also need to be listed, since it is possible for differently labeled organizational schemes to have some of the same basic underlying assumptions.

DEPARTMENTALIZED ELEMENTARY SCHOOLS

The departmentalized elementary school has been proposed as a way of improving instruction. Assumptions behind this idea are that departmentalization allows for placing teachers in

an instructional setting which utilizes their major teaching strengths and allows pupils to be grouped, subject by subject, with other pupils in the same range of achievement.

According to many educators, however, departmentalized elementary schools should be avoided since it is felt that elementary school children should not be exposed to a great number of different teachers, but be allowed to identify with one teacher. The term "mother image" is sometimes used to describe the desired relationship between pupil and teacher.

Those educators who oppose departmentalization in the elementary school feel that it could not have the flexibility in allocating teaching time which is normally found in many other organizational schemes since pupils usually come and go by a well regulated schedule. In addition it is assumed that the correlation of subject matter may be difficult to attain.

SELF-CONTAINED CLASSROOM

On the other end of the continuum is found the self-contained classroom organization in which one teacher teaches essentially all subjects. In such an arrangement the development of strong teacher-pupil relationships, the flexible use of time, and the correlation of content is far more easily and naturally obtained. Many feel, however, that most teachers cannot adequately teach *all* the various subjects found in the elementary school curriculum, hence any grouping system which places students in classes on a permanent basis is unrealistic. The variability in achievement of pupils from subject to subject makes the permanent assignment of pupils to a self-contained classroom a difficult task.

THE DUAL PROGRESS PLAN

The *Dual Progress Plan* employed by the Long Beach and Ossining, New York school systems calls for the pupils to be with one teacher for one-half day (the self-contained classroom scheme), and with several other teachers during the other half-day (the departmentalized scheme). It is felt by the originator, Dr. Stoddard of New York University, that this scheme allows a pupil to identify with one "core" teacher who teaches language arts and social studies on a graded basis while being taught other subjects by special teachers on a non-graded basis.

This scheme attempts to capitalize on the specific teaching talents of the staff. It narrows the range in achievement of pupils in several subject matter areas by a non-grading procedure, allows each pupil to "identify" with one teacher and promotes the correlation of content in a limited number of subjects.

The "core" class idea which occupies approximately one-half of the school day may not be enough of a unifying element for elementary school pupils. In the Ossining and Long Beach school districts, the plan starts in grade three and extends through grade eight. Primary grade classes are not involved. The correlation of content is limited and the program does not have the flexibility in the utilization of time that other organizational schemes might enjoy.

THE JOPLIN PLAN

This plan, which has been used by so many school districts during the past five years, is another compromise situation. In this scheme the pupils are assigned to one classroom teacher for a full day with the exception of a block of time when the pupils are placed with teachers who have a special teaching talent needed by the pupils, or placed with a group of pupils who have the same or nearly the same achievement pattern. Most of the time both of these factors are taken into consideration. This scheme can cut across grade level lines by having teachers of several grade levels exchange pupils.

The subject most commonly made a part of this scheme is reading, followed by mathematics. Teachers employing this scheme may lose some of the flexibility enjoyed by the typical self-contained classroom teachers since one or two regularly scheduled time-blocks during a school day can make the daily schedule a very rigid affair. Many districts have tried this scheme and have reported successes less than originally anticipated. This could be caused by several factors: 1) the teachers did not have the required skills to teach the group assigned; 2) the pupil's lack of sustained motivation due to the non-graded nature of the classes, and the stigma attached to being a member of a class of slow achievers; 3) the difficulty of moving a pupil from one class to another due to a change in the pupil's achievement pattern, and 4) the possibility that teachers may not be as well motivated teaching pupils other than their own for one block of time daily.

Some school districts have been utilizing the Joplin Plan in the teaching of reading for several years and report that they think it is the best scheme for their pupils.

THE NON-GRADED ELEMENTARY SCHOOL

At the present time a great interest has been expressed for an organizational plan called the non-graded school. In this plan the theory of continuous pupil progress is primary. This implies that the pupil will be taught in logical steps according to the achievement status of

the pupil, and disregards his grade-level assignment and the arbitrary assignment of subject matter to grade levels. In the non-graded school pupils of different ages are formed into achievement groups or other type grouping which demand planned flexibility.

This plan, of course, allows teachers to be very precise about achievement groupings. Pupils with like achievement patterns can be placed into groups which disregard the pupil's chronological age and grade level. Both the slow and the rapid learner can receive the type of instruction demanded by their achievement pattern. The evil effects of acceleration or retention of pupils can be overcome since pupils move through the system on sort of a "broken front" approach which does not formally and officially call to the attention of all just what the current grade placement of any pupil might be at a certain point in the educational career of the pupil in the elementary school.

It is the contention of those who are formulating the theories for this scheme that the pupil will learn more and have a more wholesome attitude in doing so. Whether this is the case remains to be seen. This scheme's strength lies in its ability to set a more favorable climate for learning through greater attention to the findings of child growth and development studies; its major weakness is the difficulty educators find in explaining the program to parents. The necessary techniques for maintaining a sound continuous progress plan may not be generally understood by many teachers. The plan calls for better evaluation procedures and record keeping, deeper insight into the problems of pupil motivation, and better command over a wide range of teaching techniques. If the non-graded organization causes teachers to increase their effectiveness in these areas, it surely will make worthwhile the expenditure of time and energy utilized for change.

TEAM TEACHING

Team Teaching as a way of organizing pupils and teachers is becoming more and more prominent in educational planning. The precise meaning of team teaching is illusive since it can take many forms. Basically a teaching team is composed of a distinct pupil group, and a small faculty group responsible for teaching the student group. From this base a seemingly infinite number of teaching team models can be developed. For example, other professional and para-professional staff members can be included on the team. Sometimes one or more intern teachers, master teachers, teacher aides, auxiliary teachers, community resource personnel and student teachers are found on teams.

The team students can be made up of non-graded pupils, gifted pupils, college preparatory pupils, general education pupils, mentally retarded pupils, or any other special grouping devised by educators.

The non-graded organizational scheme, *The Dual-Progress Plan*, *The Joplin Plan*, the self-contained classroom with modification, and the departmentalized classroom arrangement can all be utilized by some form of team teaching.

To further complicate matters, a teaching team at the elementary school or secondary school level can be composed of several teachers, each teaching his *same* subject matter specialty or with several teachers, each of whom teaches a different subject to the pupil group; or several teachers who each teach the same several subjects to the pupil group in a self-contained classroom arrangement. A great number of variations can be developed from these. For example, sometimes two or three teachers of a subject are formed into a team with two or three teachers of one or more additional subjects. Thus, a team could be composed of two English teachers, two history teachers, and two mathematics teachers, or three English teachers and three history teachers.

An interesting variation calls for two teachers with complementary skills to be formed into a teaching team with permission to be completely flexible as to which teacher will teach which subjects, or parts of a subject, to any of the pupils making up the pupil group. This scheme is being utilized at both the elementary and secondary school levels. No wonder we are finding it difficult to discuss team teaching intelligently. The combination of variables makes possible a great deal of confusion. It seems apparent that much care must be given to avoid misconceptions about team teaching by giving a clear description of the team design being considered. It is also apparent that certain team teaching models are more appropriate for some schools than others. Wise educators first determine what they want to gain from team teaching, then design a teaching team model which promises to give them the outcomes sought.

Generally, team teaching, regardless of the design, is based on at least some of the assumptions listed below:

The particular talents of teachers should be used.

Members of the faculty cannot function in isolation.

The best teachers should be given extra pay, and recognition for instructional leadership.

Teachers should have personal knowledge of their students.

Effective programs for curriculum development require teacher responsibility for an involvement in innovations.

Relationships among fields of knowledge should be developed.

School should be flexible with respect to scheduling class and grouping pupils.

Teachers should be freed from routine, clerical tasks.

Decision making should be close to the point of action.

Schools should be flexible enough so that pupils may move ahead according to their abilities.

Students with difficulties in learning need special assistance when the difficulties appear.

To operate at peak performance, schools should augment their programs with the talents of citizens.

It is understood that not all of these assumptions have the same importance, but nevertheless, they are not listed in any preferred order.

SUMMARY

It is the fond hope of educators that organizational schemes, both the old and the new, will improve instruction through a realignment of the relationship of pupil to teacher, teacher to pupils, teacher to teacher, and lay citizen to teacher and pupil. Basic weaknesses in the educational program such as a lack of pupil guidance, the apparent lack of teaching skill of some teachers in one or more areas of instruction, the lack of pupil motivation, the failure of schools to retain high calibre teachers for classroom instruction, or the difficulty in maintaining and improving in-service education programs for teachers in the light of an explosion of knowledge, and the demands of modern society for increased knowledge, has caused educators to reevaluate present organizational schemes and make slight modifications or drastic changes as the situations warrant.

Logically, when a school is confronted with a limited amount of teaching talent in a given classroom, it is necessary to reinforce the talent of the teacher with that of another teacher who has special competence. This can be done through inservice education, or through a system whereby the teacher with skill in the instructional area teaches the pupils of the other teacher.

The final alternative is to discharge the teacher and never hire another with a teaching weakness. This does not seem to be a realistic final solution to the problem. A new organizational scheme may make it possible for both a sound inservice training program to be accepted by the teachers with some degree of enthusiasm, and to allow the top talents of teachers to be brought to bear on a greater number of pupils than would be the case under current organizational schemes. Organizational schemes may make possible beneficial changes, since they often release educators from an outmoded plan which has grown restrictive with the years. It may make the staff of a school feel that flexibility is the keynote and that proposals for the improvement of instruction will be examined critically, and not "sloughed off" as impossible due to any one of a hundred reasons used for this purpose.

A staff willing to experiment with a new organizational scheme, provided it is designed with the particular school in mind, should be encouraged by both administrators and parents since it is strong proof that the teaching staff is eager to improve the instructional program and will devote the necessary time and energy to make the plan work. The students can only benefit from such an arrangement.

The improvement of the teaching of reading can come about through a change in school organization; more importantly the improvement of reading can be accomplished through a *sound* change in classroom organization. An organizational scheme which frees teachers from the restrictions of the traditional, encourages new attempts at solving old problems, allows a redistribution of teaching talent within the school, and allows for inservice growth through mutual help programs, will surely succeed.



California's New Look in Reading

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A recent article in *Esquire Magazine* entitled, "The Change Seekers," presents a thought which may contain more than a small measure of truth. It is pointed out that the person we all know as the "organization man," is being pushed aside by a new breed—business executives, government leaders, scientists, and other professional men; people who are committed to the concept of constant change. Where the organization man was the defender of the status quo, the Change Seeker attacks it. He believes that change *is* the status quo. He is a man who will not merely accept change, and adjust to it, but will actively seek and work to produce change.

I don't believe that Frank Armstrong, the author of the article, meant any more than I, to imply that change merely for the sake of change is commendable, for certainly there is much of enduring value in our society, and in our schools. But I do think he was giving recognition to the fact that the pace of change has accelerated, and that one change often creates the need for others.

We should not wonder at this increased tempo, for we learn that 93 per cent of the persons who have made significant contributions to science in the last 200 years are alive today; and that the resources which will be devoted to scientific research during the next ten years will equal the total for all past years of history. In the face of this, we should probably prepare ourselves for an even more rapid pace in the future. And as I look at the curriculum in the sixties, I would predict that it too will change at an accelerated pace.

We need to be reminded occasionally that paralleling the many scientific achievements of our age are other notable changes taking place in world affairs—politically, socially, economically, culturally, and that as a natural consequence changes are occurring and must occur in education. These are changes in fields that deal with the very way in which humans live together in a world peopled by ever-growing numbers.

To illustrate:

1. In 1938 Carl Crowe wrote a volume about China entitled, "400,000,000 Customers." The 400,000,000, of course, were China's people, referred to as a possible market for the growing industrial and agricultural products of the United States. Were he to write such a book today, it would need to be entitled, "700,000,000 Customers," for although nobody really knows how many people there are in China, the most informed estimates place the figure at about 700,000,000, and predict a population of one billion by 1970!

We can only speculate about what significance for us lies in such growth. But certainly the growth we know is occurring in China and in other areas of the world, will have an impact upon our way of life—and it should have an impact upon our schools in the sixties and beyond. We should not have to dig very deep to find implications of sweeping importance in such fields as the social studies, reading, our approach to the teaching of other languages, the teaching of American ideals and values.

2. In the changing world scene, there has developed the conviction that no longer are there only two major powers in the world—the United States and Russia, but three—the third being the neutral and uncommitted nations of the world. This "third power" will be an important element in the international balance of power; and one possible consequence could be the lessening of our own country's relative influence as a world leader.

Viewed in historical perspective, none of this is particularly comforting, especially when we are reminded that the status of nations *does change*, and is constantly changing. For example, we know that when viewed in terms of contributions to exploration, colonial expansion, military achievements, and artistic, cultural, economic, and political development, the sixteenth century was essentially a Spanish century. On the other hand, the seventeenth century, when viewed in the light of some of these same criteria, was a Dutch century; the eighteenth century was a French century; the nineteenth century was British; and the twentieth century, so far, has been an American century.

There is no doubt in my mind that some of the current concern about the quality of education and the nature of our curriculum stems from the fact that, first of all, we know that the fortunes and circumstances of nations do change; and second, that education has a direct relationship to our nation's ability to shape its own destiny, to plan for national survival, and to see that the twentieth century remains an *American century*.

These are the developments—these and many others of equal import—that cause us in education to accelerate the pace with which we evaluate our schools—to seek the best educational system that can be devised, and then to make that system work as effectively as it can be made to work.

As we seek this, we have to be concerned about what we teach in our schools, why we are teaching it, how it is being taught, and then going further—what we ought to be teaching. This continues to be the very heart of the problem of education in America, and in California, in the decade of the sixties. This is undoubtedly part of the reason for holding the Claremont Reading Conference.

It would be logical to ask what significance all of this has for a staff of people devoted to public education and, as at this conference, devoted to the continuing improvement of reading instruction.

I suppose we should conclude that in many fields of endeavor, including education, and not excluding reading, change is a part of our very existence—that what was good enough yesterday may not suit the needs of today; that a school system that contributes much to progress in the world must be in a continuous state of development.

The twentieth century has witnessed continuous growth in our knowledge of reading and how children learn to read. The *Encyclopedia of Educational Research* (1960 Edition) reports the number of scientific studies related to reading as *two* in the decade from 1881-1890, and increasing steadily in each succeeding decade. By 1931, approximately one thousand studies had been made. From 1931-1957, twenty-seven hundred studies were reported. The scope of research in reading has broadened steadily and continues to occupy a central place in our contemporary focus on educational research.

Dual Adoption of Reading Books

In September, 1961, California's elementary schools began the use of two series of basic readers. This shift from a single basic series to two of them, is a new development. It represents a departure from the concept that a single series is the key to the constitutional requirement for uniformity; that a single series is the key to the maintenance of state-wide minimum standards.

I should mention here that the adoption of the two series rather than one was made possible by 1957 legislation repealing the old requirement that state-adopted basic textbooks be

distributed to all schools on the basis of one book per child. The adoption followed a field survey which included all county superintendents and 71 selected district superintendents.

The dual adoption was meant to provide flexibility, and we assume that this flexibility will be utilized to whatever degree a local district may choose. The dual adoption was also intended to provide a broader and richer base for the reading program; the two series will contribute to that end.

The Use of the Co-basal State Textbooks

Teachers throughout the state are considering the most effective use to be made of the co-basal readers. Various procedures are possible. In city school districts, a co-basal adoption presents no serious problem. Either series can be used as basal in selected schools. The district may order for one-half of its enrollment in each series but could place the books in the selected schools. This arrangement would seem to preclude using the second series as supplementary material. In a school with two classes at each level, however, each series may be used as basal in one classroom and exchanged with the other classroom for supplementary use.

In either of these situations, the two series may be used simultaneously in the same classroom by grouping the children for instruction with one or more groups using the Ginn series, and other groups using Allyn and Bacon. The teacher would need to judge the appropriateness of the story content for each group of children. A study of the vocabulary in the preprimers and primers shows a high degree of similarity in the actual words, and in the number of words introduced, at each reading level. The two series introduce the word recognition skills in a similar manner and at approximately the same rate.

Putting any plan into operation, however, means reviewing:

- (1) the present reading program,
- (2) the available reading material, and
- (3) the new materials with their accompanying manuals and related material.

Some warnings may not be amiss. However the readers are used, care must be taken, of course, to progress at a rate commensurate with the abilities of the children. Care must be taken further that the skills are mastered at each level and that good reading habits are established from the beginning. The fact that more titles are available does not mean that children

should be hurried through all of them. Mastery of skills and good reading habits are the goals rather than literary mileage.

Further, we would recommend that the basal books be used *only* during the instructional reading period. They should not be kept in the children's desks or taken home. However, after a child has completed a book, especially in the early stages of reading, he should be encouraged to take the book home in order to share his growing reading power with his parents. Supplementary readers and library books should be available as abundantly as possible for reading at home. Many districts throughout the state are working to improve their elementary libraries in order to provide a wide range of reading material to meet the normal variation in interest and ability found in every classroom. The relation of a well-equipped and adequately staffed library to programs for the improvement of reading cannot be over-emphasized. This is a worthy goal for greatly increased educational effort.

Other ways of making the most efficient use of the materials provided by the State in conjunction with resources available in the district can, no doubt, be suggested by ingenious school personnel. The important issue is that we recognize that the co-basal adoption necessitates rethinking and replanning to make the books most useful in a developmental reading program.

Now, I do not know whether anything I have said can be taken to mean that California has a "new look" in reading. Certainly where there is constant change—as there is in California—one would have to assume that the new look is constantly with us. When we move from single to dual adoption of basic readers; when there are signs that still further changes, possibly resulting in local adoptions, may be in the offing; when we learn of the interesting and successful experimental programs being carried on in various California school districts; and when we review the broad scope of interest in the field of reading as shown by the subject matter of the various sessions that have been held here at Claremont during the past two days, one would have to conclude that California's new look in reading is being shaped actually by people like those gathered here, who are decidedly not the "organization" men of education but who rather more nearly fit Frank Armstrong's definition of the "change seeker." For you have been seeking and working to find better ways—and hence to produce change.

And this, of course is good. You accept a challenge that is clear—change is going to be constantly with us as we work with a constantly changing population:

Until recently 49 per cent of our population had had no adult experience under
a Democratic administration

Today 59 per cent of our population are persons who had no adult experience with World War II

Today 64 per cent of our population have had no adult experience with mass unemployment

And 79 per cent of our population have had no adult experience with the 1929 financial and economic crisis

But 100 per cent of our population are destined to live and survive in the decade of the sixties. With one-third of this population between the age of five and the age of retirement devoting full time to education, it would appear that the responsibility that rests with us is a heavy one—a responsibility to continue striving for the best that can be devised. This is our challenge for the decade ahead. Our response to this challenge is going to help shape California's new look in reading.

The Language-Experience Approach to Reading

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A sense of urgency surrounds the question of improving reading instruction at all levels of the school program. For some educators this is a new concern, but for most of us it is not. It is one which has been the all-consuming interest and focus of activities of some of our most prominent educators and most dedicated professional societies. But today's heightened public interest presents new opportunities for answering this question with new positive action. The challenge to improving reading instruction opens doors for rethinking our present approaches and requires that in reading instruction, as in all other areas of human endeavor, more effective programs must be developed. School programs are dealing with the *human* resources of our society—resources which are so precious and essential to survival that we cannot risk the possibilities of *intellectual servitude* any more than we can risk the possibilities of *physical servitude* as a result of not doing our best. This means that reading instruction must result in more than pronunciation of words, the reciting of phonetic or grammar rules, the verbatim parrotting or rote memory of passages, and the completion of pencil and paper activities which are selected and administered by the teacher. Reading instruction must result in more than blind following of the printed page. Reading from its very beginning must be an integral part of a meaningful, useful language experience. At all times it must remain in its natural relationship to the other communication skills of listening, speaking, and writing.

A danger to society which is far greater than the fact that all children read the same book is the danger of uniform responses to ideas. Uniform, blind thinking is the dream of leaders in authoritarian societies. The contrasting dream of a democratic society is that reading instruction will serve to develop thinking individuals—

who are critical of sources, definitions, and assumptions

who are prepared to select from the many sources available those which serve the situation best

who choose a wide variety of reading materials for leisure time activity

who view reading as a means of communicating ideas, ideals, aspirations, and flights of fancy

who contribute to the storehouse of reading materials by recording their own thinking on topics of deep concern and personal pleasure

For many years some of us have felt that a reading instructional program with broad goals which are related directly to effective living in a democratic society could be achieved. We have worked diligently to identify some of the obstacles and to enlist the help of classroom teachers in trying out new approaches. One of the results of this effort is the beginning description of an approach to reading instruction which has come to be identified in the San Diego County Reading Study Project as the *language-experience approach*. The name has evolved as a result of the main focus of effort on the part of the researchers in the project—the effort to identify the language experiences (listening, speaking, reading, and writing) which are essential tools of communication for effective participation in a democratic society. Briefly stated, the language-experience approach is one which brings reading and other communication skills together in the instructional program. In this approach there is no way, or any need, to distinguish between the reading program and the development of listening, speaking, and writing skills. This "togetherness" of the development of skills makes possible the continuing use of each child's own experience background and thinking as he grows toward reading maturity. More than other approaches which have been described at the classroom operational level, the language-experience approach uses the thinking of individual children as the basis for skill development. As each child matures, he conceptualizes reading in a rationale which might go something like this:

What I can think about, I can talk about

What I can say, I can write

What I can write, I can read

I can read what I can write and what other people can write for me to read.

From the earliest days of school each child is encouraged to share his ideas with others through the use of words and pictures. With repeated opportunities for creating stories and

for writing stories with teacher help, children begin to develop writing vocabularies and are able, in an amazingly short period of time, to write their own stories independently. Soon each child's ability to express his ideas in writing is limited only by his ability to create ideas.

COMPARISON OF COMMON GOALS IN READING

Whether a teacher is using the language-experience approach or any other well defined approach, there are many common goals as far as the development of a balanced reading program is concerned. To achieve these common goals, each approach has a plan for developing a basic sight vocabulary and competence in using a variety of word recognition skills, of providing a wide variety of reading materials, of integrating the various communication skills, and of developing a genuine desire to read.

Developing Basic Sight Vocabulary

A common goal of all plans or approaches is to help each child develop a basic sight vocabulary. In most plans the selection of the vocabulary to be developed is on a basis of high frequency in our language. Material is developed which repeats each word a sufficient number of times for most children to recognize it at sight.

In the language-experience approach the idea of the highly controlled vocabulary for beginning readers is rejected as being invalid. The development of a basic sight vocabulary is deemed to be an individual matter and is governed to a great extent by the *oral vocabulary* of the learner. From oral expression the next step is writing, or recording the oral language. This is done by the teacher or the child according to maturity and ability. Recall, or reconstruction of the written language (reading), is a third step in the sequence of developing basic sight vocabulary.

Early recognition of words of high frequency in our language is a natural result of repetition which cannot be avoided in a productive environment. Each child gradually gains a sight vocabulary of common words in our language, but at the same time he gains a personally tailored sight vocabulary which is functional for him and which reaches far beyond the words which are selected for other reading programs. Ceilings are lifted for all children.

Phonics Instruction

Among the word recognition skills which are developed in all successful reading approaches

but treated differently in the language-experience approach is phonetic analysis. Phonics instruction is a necessary and natural part of the language-experience approach, but it is developed from a "say it" to "see it" sequence rather from the "see it" to "say it" sequence of other approaches.

We have known for a long time that there is a closer relationship to phonics and writing than to phonics and reading. The application is necessary and immediate. The desire to create stories and do independent writing provides a powerful motivation to acquire skills of selecting the correct symbols to represent the sounds of oral language. The phonics learnings take place in their natural setting and have immediate application. They are applied to the real language experiences of each child, including skills in listening, speaking, and word recognition and spelling.

Materials for Reading

The problem of providing appropriate reading material for each child in a given classroom has been and is a source of real concern for a teacher or administrator who knows anything of learning processes. Within a given classroom there may be a son of an English professor and one of a migrant farm worker. Both have good ideas. Both have information. Both have self-motivation to share their ideas and information with others. But the information shared will probably be quite different and the quality of oral language might be poles apart. Between these two children of extreme contrasts in experience and language development there is a wide range of differences among the other children at any grade level.

What materials will the teacher use to help each child conceptualize reading as a record of oral language? What material can be selected which will be of interest to the wide range of individuals? How can a teacher have enough materials which are not too difficult for some and too easy for others?

As I read the professional books on reading instruction these points are labelled as essential for success in learning to read—materials which are related to oral expression, interesting and easy!

Maybe you have tried using materials which have been developed with a very limited vocabulary. They are easy for some, but they are ridiculous in terms of their relationship to oral expression and interests of children. This is especially true at the beginning levels where the concocted materials are devoid of any real meaning or interest. There is no story, no

message from an author, absolutely no similarity to the oral language of the children who are learning to recognize the words.

The language-experience approach features children as authors with unique language abilities, with wide interests, and with individual vocabulary control built in. In the process of dictating and writing their own ideas, children learn to recognize enough words that they can read what other people have written with little or no systematic instruction.

Some people might say that oral language of children is so far advanced by the time they start to learn to recognize the symbolic forms of words that anything they would dictate or write would be too difficult. But analysis of reading material shows little evidence of any attention to what makes a sentence easy or difficult for a child to read. It is quite possible that the choppy, unnatural sentences of present-day pre-primers and primers are more difficult to read than more natural sentences might be. The experience of teachers who emphasize authorship in their classrooms bears this out.

To the extent that children perceive themselves as authors—producers of reading materials—they are interested in interacting with the products of other authors. First, they are interested in knowing what other authors in their class have produced and from there their interests expand to encompass the whole world of authorship. Their interest and their basis of selection of books is not that they can learn *how* to read if they read a given book, but that the author has something to say. Reading of whole books becomes a natural desire and a natural language experience of children. They assume responsibility for selecting their own material; in fact, self-selection of materials is mandatory in the language-experience approach. Many books must be in the environment—books that have been produced by the children and books purchased and brought into the classroom, books from the public libraries and books from home. Books must be selected with a wide range of difficulty, a wide range of interest and information, and a wide variety of literary forms. The success of the language-experience approach depends on the development of a balanced program of production of reading materials and the use of increasingly varied reading materials.

Motivation for Reading

Motivation for reading is stimulated through the child's realization that his oral language expression, based upon his own experiences and thoughts, can be written and read along with reading the thoughts and ideas of others. This is quite different from approaches where chil-

dren are motivated to read by being helped to see the relationship of their own experiences to the story selection to be read.

Integration of Communication Skills

Teachers who use the language-experience approach do not attempt to distinguish between reading development and other communication skills—listening, speaking, and writing. In fact, a time for writing might be looked upon as a most profitable experience for developing word-recognition skills for reading. The *how to read* part of the program is integrated with other aspects of skill development—spelling, writing, listening to stories, and telling stories.

Classroom Organization

Classroom organization must be adapted to serve an approach which does not require regular reading periods and follow-up activities each day for every child. Organization, materials, and facilities must be provided for a strong emphasis on production of materials. To accompany this emphasis must be adequate materials for children to select a variety of reading materials for information, recreation, and skill development. The program is incomplete until there is provision for sharing, discussing, and interacting of ideas, thoughts, and concerns of children in the class with the ideas, thoughts, and concerns of good adult authors.

Evaluation of Pupil Progress

A program based on the gradual maturing of language experiences of children must be evaluated on a broader base than that afforded by standardized reading tests. Ability to express personal ideas in oral and written form is a continuing expectancy. Comprehension and interpretation are judged as reading skills. Growth in depth of thinking, clarity of expression, sentence sense, and correct spelling are revealed clearly as children write on their own. The teacher has multiple clues of progress in skill development and creative thinking which are not present in many reading programs.

CONCEPTS WHICH THE TEACHER HOLDS

The language-experience approach is dependent on the evolution of a conceptual framework more than on certain methods or materials. Teachers and supervisors working in the program establish a pattern of thinking which guides them in the selection of activities, experiences,

materials, and evaluation. This conceptual framework helps teachers establish goals for teaching which interrelate reading instruction with instruction in other communication skills. Some of the concepts which a teacher must hold in order to work within the spirit of the language-experience approach were identified by teachers participating in the San Diego County Reading Study Project. Briefly stated, they are:

1. As a basis of reading, the child should gain the feeling that his own ideas are worthy of expression and his own language is a vehicle for communication.
2. The basis of children's oral and written expression is their sensitivity to their environment both within the classroom and in the world at large.
3. Freedom in self-expression, oral and written, leads to self-confidence in all language usage which includes reading skills.
4. Children's oral expression may be stimulated and strengthened through paintings, drawings, and other graphic art or sound symbols.
5. The child's own thoughts may be used as the main basis for development of instructional reading materials.
6. There is a natural flow of language development in children. This flow proceeds in the following steps:
 - a. The child's oral expression is stimulated and strengthened through art expression.
 - b. Children's written expression flows easily from their oral expression.
 - c. Motivation for reading follows easily from the child's seeing his own language in written form.
 - d. After reading his own language in written form, the child moves "naturally" into reading the written language of other children and adults.
7. Numerous activities, experiences, and devices are used to provide for interaction of children such as sharing experiences, discussion experiences, listening to stories, telling stories, dictating, developing word recognition skills, making and reading books, developing basic sight vocabulary, expanding individual vocabularies, writing independently, choosing reading as a leisure-time activity, using reading as a study skill, and reading as a process of thinking and interacting with an author.
8. Utilization of the child's own language as a basis of reading instruction results in a high degree of independence in writing and reading.

One might continue indefinitely to describe an approach to reading which is built upon a base as broad as the language experiences of the children we teach. The future development of the approach will not depend on what is said here, but rather on the changing role of reading in enriching the lives of children, in facilitating learning, in promoting good citizenship and in strengthening each child's concept of himself as a contributor of ideas to an emerging and growing society.

Action Research in Reading: A Case Study

BOYD LANE, JAMES F. HALCOMB AND RUTH G. STEINMETZ*

Three of us, a teacher, a school principal, and a director of curriculum, have a story to tell. The story is about an action research project which was begun to find ways to improve the reading program for children in one of our schools and how this program spread to other schools in our area. The setting is the Brier Patch Elementary School in the La Mesa-Spring Valley School District in San Diego County, California. The main characters are the children, their teachers, and the principal of Brier Patch School. The principal will set the scene for us and tell us what problems were identified by his faculty as they set out to find more satisfying ways of teaching children to read. One of the members of the school faculty who took a leading role in getting the action research project started will follow by telling us the ways in which she and other faculty members became actively involved in the action research project. I will conclude by describing how this research project spread to other classrooms and schools in our own and nearby school districts.

The Principal Speaks:

Brier Patch Elementary School was organized in 1957. At that time, its pupil population of four hundred and fifty kindergarten through sixth grade children was drawn from three existing schools. The faculty of fifteen teachers represented an experience range from two beginning teachers and four teachers new to the school district, to one teacher with twenty years' experience in teaching. The 1960-61 school year found a faculty of eighteen teachers working with six hundred fifty children. Four of this staff were new to teaching during the 1960-61 year; nine had been on the faculty less than two years, and eight were present when the faculty was first formed.

During the first year of organization (1957-58), most planned reading instruction followed the basic reader approach. Reading manuals from several series formed the major guide for

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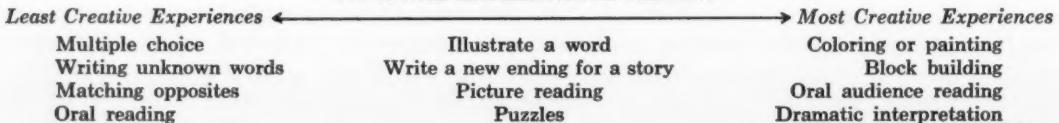
classroom teaching procedures. Attempts at meeting individual differences in reading were primarily limited to grouping children within each classroom according to their ability to handle the various reading texts supplied. The most frequent organization involved the familiar three groups.

By the end of the first year, the faculty evidenced concern regarding the effectiveness of their reading program. In faculty discussions, the following conditions were identified which they believed warranted careful attention in the future:

1. Individual needs were not adequately met in the groups as constituted.
2. Work sheets required too extensive use of teacher time for the value received.
3. Pupil time was not effectively used in the reading circle.
4. Pupil control during independent work time was difficult to maintain.
5. Stereotyped grouping provided a psychological handicap for some children.
6. Motivation level of basic materials was weak.
7. Pupils were insufficiently involved with content.
8. Teacher enthusiasm for content became progressively less as materials were covered year after year.
9. Reading became a laborious task of calling words for many children.
10. Slower readers had heard more advanced groups read stories, reducing their own motivation to read when stories were encountered.

Having identified these areas of concern, the faculty devoted extensive efforts to developing techniques which would minimize the difficulties. While engaged in this activity, the group was able to hear Dr. Victor Lowenfeld discuss the role of creativity in the learning process. Following this discussion, the group devoted a series of meetings to defining the many activities which contribute to reading skill growth. They then attempted to divide these language experiences into three groups based on the degree of creativity. Their conclusions are shown on the accompanying chart. Though the classification of many items can be challenged, the chart does represent the consensus of the group at that time.

LANGUAGE EXPERIENCE IN READING



<i>Least Creative Experiences</i>		<i>Most Creative Experiences</i>
Reading games	Book report	Clay modeling
Recording reading	Questions about a story	Creative writing
Reading character parts	Self-selection of reading books	Cut and paste
Jokes	Choral reading	(Creative) listening
Drilling	Experiments	
Choosing main idea	Field trips	

The group arrived at the hypothesis that the least creative activities test skill growth while the most creative activities lead toward language skill development. *They felt that both were essential to a good instructional program but that the general tendency was to do far more testing than teaching.* Considerable effort, therefore, was directed toward providing for more creative activities and for increasing the teaching effectiveness of testing devices. For assistance, the faculty turned to the curriculum staff of the San Diego County Schools. Suggestions were received and put into practice in the classrooms which sought to integrate more fully the several language functions in the reading program. In other words, we became involved in a *language-experience approach* to our teaching of reading.

Let us now turn to the reactions of a member of the faculty of Brier Patch School, a person with considerable background in teaching, to share her views as she participated with the staff in finding more creative approaches to the teaching of reading—approaches which sought, at the same time, to integrate the language functions of speaking, listening, and writing, with reading.

The First Grade Teacher Speaks:

For the teacher who is ready to try an experimental program or an action research project three requisites are important. First, there must be the recognition of a problem. Second, there needs to be someone else who will take an interest in the project and give time to clarify thinking and to encourage the teacher to try a new program. Third, while the project is going on, there must be an administrator who will give constant backing and encouragement.

While all three of these requisites are vital, certainly there would be no experimentation if there were not a strong desire for change or at least an interest in seeing what a new approach would accomplish. Those who are completely satisfied with the programs and techniques that are presently used will not have the needed incentive for change. However, as a teacher carefully evaluates the needs of the class and considers how each individual can be stimulated to

reach the limits of his own capacity, he undoubtedly will come to feel that he can improve the manner in which he is teaching.

My opportunity to try a different approach to helping first graders learn to read came some time after my recognition that I indeed had a problem. I found myself, after several years of teaching second, third, and fourth graders, assigned to a first grade. Since I knew very little of the actual transition of kindergarteners to second graders, I began by using the materials and following as nearly as I could the techniques of the other first grade teachers. But, as my second year in the first grade stretched into my third, it became increasingly evident that the traditional approach to reading—including “reading readiness activities”—did not meet our needs at all. In many instances, they seemed actually to delay the development of a useful reading vocabulary by consuming too much time in learning many isolated words which did not fit together to convey an idea. Experience charts often failed to achieve the desired involvement on the part of the children most in need of stimulation.

The vocabulary in the books was limited. So instead of facilitating true reading, these seemed almost to be holding us back! However, no one else seemed worried or dissatisfied, so I went along trying to evaluate alone what was happening to my reading program.

At one point, I mentioned my concern to my principal. To my comment that this just didn't make sense to me and that there must be a better way of doing it, he replied, “I'm sure there is. Why not do something about it?”

I made up my mind then that I would do just that the next year when we could think, plan, and evaluate together for an improved program. However, many changes were taking place in our rapidly growing district, and it was not the next year when I had the second requirement mentioned previously—a principal and faculty members who had worked together for a year and were therefore acquainted who were ready to look critically at the reading program, and who were willing to face the challenge presented when we realized that our current teaching practices fell somewhat short of our goals.

During a year in which I worked outside the classroom, I had read about the *language-experience approach* to reading and had felt that this approach seemed to hold many reasonable answers to my concerns about my reading program. As our faculty continued to discuss our reading program and to evaluate it in the light of such objectives as meeting individual differences more effectively, challenging the mature child while not discouraging the immature,

encouraging creativity, stimulating real interest and love of reading, I became more and more eager to give the ideas included in this approach a try.

As we were working with our "new" approach, we continued to evaluate and to try to learn more about it. The principal gave a great deal of time and thought to the project, and equally important, he gave his constant encouragement so that when the inevitable doubts arose, we were helped to move ahead. Faculty meeting time was frequently available for more discussion. In-service education programs brought in resource people.

Through the cooperation of the administrators and teachers, this experience was a most rewarding one. Not only were the progress and enthusiasm of the children a great satisfaction to us, but from the stimulation of such an experience teachers felt encouraged to seek further ways of improving their teaching.

While it is the teacher who actually carries out the program with the children, the role of the administrator and supervisory personnel is very important. They supply the support needed, and they must be able to explain and if necessary defend the program to parents. They also can do much to stimulate teachers to evaluate their programs and to question current practices to determine whether they really are the most effective ones for them. They must be ready to help with new programs and to encourage sound experimentation in the classroom where, after all, any program must prove its worth.

The Curriculum Director Concludes:

You have heard our story from the principal and the teacher. As a curriculum director, it is important to me to observe that many teachers, children, and principals became involved in a similar search for answers at about the same time. While teachers in Brier Patch School were struggling together to find improved ways of teaching reading, many other teachers in our area became involved in a similar quest. Every teacher so involved, with his principal, expressed a desire to develop some sort of evaluative instrument which would help tell us better than the usual devices of this sort how effective our work with children in reading really was. As a consequence, a group of people concerned with instruction at the administrative level in San Diego County, decided to do something about it. They requested the Department of Education of San Diego County to design a research study to be carried out in as many districts in the county as wished to participate. The design for the experiment proposed that there were at least three highly valuable approaches to the teaching of reading. All three of these

approaches met criteria which set high standards. They were called the "basic reader approach," the "individualized reading approach," and the "language-experience approach." Perhaps the language-experience approach was the least known generally. The individualized approach was beginning to pick up momentum nationally, but few descriptions of it were available. By all means, the basic reading approach was best known among teachers.

A year was taken to refine the research design and to develop the official descriptions of the three approaches for use in the study. The approaches were described in terms of criteria (what the teacher does) and rationale (why the teacher does it). A series of in-service workshops were conducted for teachers in each of the three approaches to further develop the official descriptions. Members of the County Reading Committee chaired these workshop sessions assisted by curriculum coordinators and others on the county staff who had knowledge and understanding of a particular approach.

A second aspect of the study was that of involving children directly. Teachers in each of the three approaches, following their in-service education workshops, attempted to implement as best they could the approach which they had chosen. Youngsters were tested at the beginning for the in-service education period (the control period) and at the end of that period. They were also tested at the end of the experimental period. Tests were not only the achievement type test, so well known to us, but also tests of personality and attitude. Since no adequate attitude test was available, the Reading Committee developed and validated an inventory of pupil attitude toward reading. Other "homemade" instruments which proved to be useful included an inventory of teacher approaches to reading and opinion inventories regarding all phases of the program.

Although the data are not completely refined at this point,* it is safe to say that teachers were able to implement the three different approaches, that the in-service phase was rated highly successful by the teachers, and that youngsters over the entire year of the experiment were judged to have grown significantly in reading achievement. If nothing else, this study opened new ways of teaching reading to many teachers. It gave them assurance that these approaches are good approaches. It does not pit one approach against another, but it does invite the teacher to study several approaches and to select one or more which may meet his own and the children's needs best. Because of our experience in such a cooperatively designed action research study, we recommend similar studies to all who work to improve the teaching of reading.

*Preliminary reports are available through the Office of the Director of Curriculum Coordination, San Diego County Schools, Civic Center, San Diego 1, California.

What Research Says About Individualized Reading

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The number of basic research studies dealing with individualized reading is increasing. These studies are enabling educators to evaluate critically the individualized pattern of reading instruction. While favorable reports of the individualized pattern of reading have come from all sections of the country, criticisms of this pattern have also been reported. It is with these criticisms and their validity, as shown by controlled research, that this discussion is concerned.

Experimentation with various types of classroom organization for the improvement of reading instruction is in progress in many school systems. Individualized reading is part of this experimentation. The remainder of this report will: (1) examine briefly the reasons for the resurgence of interest in the individualized reading pattern; (2) define individualized reading; and (3) react to four criticisms of individualized reading in terms of the basic research available and applicable to these criticisms. These four criticisms are:

1. Very little controlled research on individualized reading has been reported.
2. Individualized reading cannot be used with all levels of ability. To state the criticism in another way, individualized reading seems to work best with just the brightest or the best readers.
3. Individualized reading may succeed in the upper grades but not in the primary grades because these children need the basal readers to introduce them to reading.
4. The skills are neglected in individualized reading because there is no rigid sequential order suggested.

These four are not the only criticisms directed at the individualized reading pattern, but they are among the most frequently mentioned objections to individualized reading.

The Resurgence of Interest in Individualized Reading

Two major plans for classroom organization of reading instruction have been advocated

and used in differing degrees in the elementary schools: (1) the individualized, in which reading materials and instruction are designed to meet each child's specific needs, and (2) the basal plan in which children are grouped for reading instruction and taught through the use of one or more series of basic reading texts. Both patterns, the basal and the individualized, have been in common use in the nation's schools. As public education has expanded, greater emphasis has been placed on the basal pattern because it is a group-type class organization aimed at meeting individual differences. An as yet unsolved problem, however, is that of developing basic reading skills to promote maximum individual learning by means of more effective classroom organization. For example, around the country can be found a rash of classroom organization plans for teaching reading. Most of these are experimentation within the framework of the basal text structure using homogeneous grouping, heterogeneous grouping in self-contained classrooms, whole class groupings, team teaching, and non-graded classrooms. In this connection Goodlad has warned:

We have been around the clock at least once in the search for adequate patterns of school organization. We must avoid going around again in the same way and coming up with the old unsatisfactory answers (13:20).

Tracing the development of patterns of reading instruction during the last twenty years, Gray observed that we do not have the answer to instructional organization, but that progress has been made toward the development of patterns geared more closely to the goals of learning. He said:

During the last twenty years efforts to develop improved patterns of instructional organization have continued at an accelerated rate. A major contribution has been the development of patterns that are more refined and more explicit in purpose than some used earlier. For example, in efforts to develop relatively homogeneous groups for the mastery of common learnings, wide experimentation has been carried on with sub-grade, sub-class and inter-grade grouping. The use of other terms such as interest and heterogeneous grouping recognized still different purposes and instructional patterns. Furthermore, the phrase individualized teaching and self-selection has been adopted to distinguish an instructional pattern from provision for individual differences within a group (14:16).

Increasing attention, therefore, has been given in recent years to programs of developmental

reading for all pupils. It has been reflected in a great volume of research. Dolch stated the problem in this way:

How should children in a room be grouped for reading? Or should they be grouped at all? These questions are so vital to both the teacher of reading and to the child's mental health that we should look at all the possibilities and at all the problems involved before we come to a decision (10:479).

The current experimentation within the framework of the basal text would seem to be indicative of unrest or dissatisfaction with the existence of group-type directed reading activity.

One answer to the problem, some educators believe, is the individualized reading pattern. It is receiving increasingly popular approval as an alternative to the basal textbook pattern. Favorable reports of this pattern of reading instruction have come from all sections of the country. Gray summarized the current thinking of those interested in individualized reading:

The arguments advanced by its proponents run about as follows: Children differ so widely in interests, capacity to learn, and motives that it is impossible to provide adequate stimulation and guidance through the use of the same materials and group instruction. If the child is to develop individually, creatively, and in ability to think clearly and to interpret deeply, he must not be hampered by group regimentation (14:99).

Witty has listed reasons for a renewed interest in individualized reading:

1. The high incidence of poor reading to be found among pupils in our schools.
2. The growing recognition of the failure of many boys and girls to develop a permanent interest in reading as a leisure pursuit.
3. Varied interests and needs cannot be met effectively through group instruction.
4. Critics of the basal readers, the "sober books" as Frank has called them (49:402).

Summary

1. The problem of the development of basic reading skills to promote maximum individual learning by means of more effective classroom organization is as yet an unsolved problem.
2. Two major plans for classroom organization of reading instruction, basal and individ-

ualized, have been advocated and used in differing degrees throughout the educational history of our country.

3. Recent experimentation within the framework of the basal text structure using homogeneous grouping, heterogeneous grouping in self-contained classrooms, whole class grouping, team teaching, and non-graded classrooms seems to be indicative of either dissatisfaction with the existing group-type directed reading activity or an attempt to improve it.

4. One answer to the problem, some educators believe, is the individualized reading pattern.

INDIVIDUALIZED READING PATTERN DEFINED

Leadership in the development of individualized reading was supplied in the thirties by Olson and his co-workers who adopted an individualized approach to reading at the University of Michigan. These studies have given support to theories of individualized reading subscribed to by some present day reading specialists. These specialists hold that the child's own desire to explore, to discover and react to stimuli in his environment, guided by his own motivation to learn, enables him to develop meanings which are essential to changes in reading behavior. Basic to this pattern is a theory of learning which holds that each individual learner is motivated primarily in terms of his own needs and that, when provided with the appropriate environment, guidance, and materials he will tend to choose materials most suitable to his own level of maturity, ability and interests.

Individualized reading guidance, it is stressed, is not a single method with predetermined procedural steps to be followed in formal sequence. This type of instruction does not eliminate group reading; neither does it support a laissez-faire attitude toward instruction. The prime objective of individualized reading is to provide each pupil with a variety of reading situations so that each may progress according to his own growth rate.

The role of the teacher is to introduce reading skills which are functional to the child's experiences, to provide a variety of balanced reading materials, to develop interests and attitudes, and to evaluate reading progress. This is done primarily during individualized teacher-pupil conferences by means of teacher and pupil records of progress, teacher guidance in the selection of reading materials, and individual and group assistance during silent reading periods.

RESEARCH PROVIDES SOME OF THE ANSWERS TO THE CRITICISMS OF INDIVIDUALIZED READING

Criticism Number One: Very Little Controlled Research on Individualized Reading Has Been Reported.

Witty, in an analytical review and evaluation of the research done in individualized reading, stated:

It may be readily concluded that available experimental data do not justify the recommendation of sole dependence on individualized reading. The experiments appear generally to be inconclusive and to lack sufficient provision for variable factors which may influence results. Most teachers, however, who write on this topic are enthusiastic in their endorsements and many children seem to find satisfactions previously not experienced in reading (49:408).

McCullough reacted as follows to the research on individualized reading:

The research conducted so far to show the merits of individualized reading as a total program has not been conclusive. Some has been done by people more zealous than objective. Some studies have had no control groups at all to match the experimental. Measurement of the success of the individualized experiments has been limited to cheerful miens, numbers of books read, and the scores on survey tests on reading (33:163).

Johnson thought that individualized reading had much to offer in meeting the individual needs, but cautioned that there are as yet many unsolved problems. Among the problems listed was the reporting of very little controlled research on individualized reading (23:1-4).

The interest of public school educators in this pattern of reading has been evidenced within the last ten years. The concept of individualized reading instruction, however, is in no wise a new one. A review of types of classroom organization for reading instructions reported in the literature indicates that for many years educators have experimented with individualization of instruction.

Stauffer pointed out that as early as 1925 the *Yearbook of the National Society for the Study of Education* recommended the differentiation of instruction for individual needs. Both Part I and Part II of this yearbook accented the values of wide personal reading (44:335-341). In this 1925 Yearbook Courtis and Washburne both reported the results of an early study comparing pupils in schools where individualized instruction was practiced with those in schools

organized on a group instructional plan. These studies were made in Detroit, Michigan, and in Winnetka, Illinois, in 1920. Courtis compared 180 first-grade pupils in four schools using individualized instruction with pupils in four comparable schools using group instruction procedures. Gains in reading skills as a result of five standardized tests were much greater for the experimental than for the control groups (47:198-200).

Washburne compared 674 Winnetka pupils taught by an individualized method with 803 pupils taught by group methods on silent reading skills. He found that the Winnetka pupils scored higher at each mental age level than did the class-taught group (47:198-200).

In 1921 Zirbes and others, using an experimental and a control second-grade class of average children, compared the values of intensive instruction in reading with independent silent reading. The results showed that the average growth in reading ability was about the same for the experimental and for the control group. However, brighter children profited more from independent silent reading and immature children from intensive instruction in reading. It appeared that children with inadequate reading abilities and without appropriate instruction and supervision frequently acquired bad reading habits and attitudes. The study did reveal that pupils who had learned to read simple materials with ease and understanding and who had the opportunity of extensive individualized reading experiences made more rapid progress than pupils of equal reading ability who did not engage in such reading (50:1-66).

A study by Jones was concerned with the nature of instruction rather than with grouping *per se*. She attempted to determine whether children would make greater progress in learning elementary school skills when they were taught under grouping procedures. Two hundred eighty-eight students in the fourth grade were equated in experimental and control groups with a range of ability from slow learning to superior. In the experimental group, materials were used ranging in difficulty from grade two through grade six and were adapted to the appropriate achievement level of each child. In the control group, instruction proceeded on the assumption that all students in the class were ready for fourth-grade work. All members of a class studied from the same books and were given common assignments. Achievement tests were given in September and again in May. Jones reported consistent advantages for the experimental group. She also found that individualized instruction appeared to be more beneficial to the slow or average in ability than to the superior students. This evidence also refutes the belief that only very superior or very slow children are in need of individual attention in instruction. Since the sample was large, and since the study was carefully controlled, the evidence in favor of

individualizing instruction in the classroom can be given considerable weight (24:257-272).

These are just three of the early studies which might be cited.

Recent Controlled Studies of the Effectiveness of Individualized Instruction

The first of the recently controlled studies of the effectiveness of the individualized pattern of instruction was done by Palmer at the University of Utah with a fourth-grade class. Her findings indicated that the children of this study:

1. Had made reading gains equivalent to comparable groups of other children within that same elementary school district.
2. Had read more books and covered more reading materials during the total reading periods than had other comparable groups of children.
3. Had been provided, as a consequence of the individualized pattern, with greater opportunities within the classroom for creative activities, and hence, had exhibited greater creative thinking.

Values other than reading that seemed to accrue to children were listed as (1) alert children were allowed to grow in reading without deprivation and slower children to grow in comfort; (2) critical thinking; (3) exploring interests; and (4) the role of the teacher changed to one of guidance and pacing rather than directing. It was found that children tend to form a rhythm of reading, alternating difficult with less difficult materials. The observation was made that this is not possible in a three-group system in which children are presented with readers of increasing difficulty (37:1-19).

McChristy studied the reading gains made by one hundred sixty boys and girls carefully selected from eight second-grade classes over a period of one year. In four of these classes (control group) the basal text pattern was used, while individualized reading was employed in the other four (experimental groups). The children in the two groups were comparable in mental age, intelligence, and socio-economic background. The teachers were matched on the basis of educational training and experience. In the control groups, instruction was given to three groups based on reading ability. Books to be read were selected by the teachers from series available. The experimental group followed the individualized plan with detailed reading record cards, self-selection of reading materials, and individualized groups meeting with the teacher.

Standardized reading test results showed that self-selection produced significantly greater gains than did conventional reading methods in the areas of reading vocabulary, reading compreh-

hension, and total reading. The control group averaged 1.14 years in total reading gains, while the experimental group averaged 1.41 years. The average gain in the experimental group in reading comprehension was 1.96 years, while the control group averaged 1.31 years. In vocabulary growth, the control group averaged 1.09 years and the experimental group 1.26 years.

It was concluded that second-grade pupils were able to choose, from appropriately stocked classroom libraries, reading material which promoted their reading growth and that self-selection in reading may be used successfully at the second-grade level (32:1-90).

Karr reported the results of an experiment in Pittsburg, California, using third-grade classes. At the end of a six-month period these children were compared with another group of third-grade children in a different but neighboring community. This latter group was taught through group procedure. The results of testing showed that the children who participated in group procedures made slightly greater gains in vocabulary and comprehension than did the children in the individualized reading group. Gross socio-economic differences in the cultural backgrounds of the two groups of children, however, may have militated against any fair comparison of the two methods (25:174-177).

Anderson and others contrasted the results of the individualized reading pattern used by the University of Michigan demonstration school with a basal pattern used in the public schools of Ann Arbor. At the end of the primary grades, the basal text group was significantly better, despite a ten-point intelligence quotient handicap. At the end of the sixth grade, the individualized group seemed to show some superiority over the basal group. Ruling out intelligence as a factor in the differences between the schools at the primary level, the investigators hypothesized a difference in the method of teaching reading was involved. It appeared that the basal pattern employed by the public school enabled the children to learn to read early and reduced the individual variation in age of learning to read. Conversely, the informal pattern used by the university school apparently delayed the age of beginning reading and maximized the individual variations which occurred in this connection.

A final phase of the study was the determination of rate of reading development after the age of learning to read. The longitudinal records of reading achievement were available on all of the subjects through the sixth grade. These records were used to compare the average growth in reading between the schools after the children had learned to read. The final statistics showed that the initial difference between the groups was not sustained indefinitely. Once the children had learned to read, a more rapid rate of gain was revealed for the university school group than

for the public school group. As a consequence of this difference in rate, the initial delay on the part of the university group was overcome at the age of 132 months, on the average. The results of the study indicated that the difference in the two methods does not have lasting effect and that reading can be taught successfully either way.

An important aspect of this study is the fact that it compared an individualized reading pattern with which a school was satisfied with a basal pattern with which a school was dissatisfied. In many of the research reports, dissatisfaction with basal reading instruction has spurred experimentation of teachers and school districts with individualized reading instruction (3).

This study also substantiates the findings of Zirbes and of Bohnhorst and Sellers that the values of individualized instruction may not be immediately apparent, but accrue over a period of years (7:185-190; 50:1-66).

Bohnhorst and Sellers compared individualized and basal reading programs during two school years, in Atlanta, Georgia. Five of the six teachers for grades one, two, and three in an Atlanta school made preparations for, and participated in, the experiment. They taught according to the usual program for the first half of the year.

The latter four months of the school year 1956-57 was divided into two periods of eight weeks each. Each teacher proceeded with her basal textbook program during one period and followed an individualized program during the other period with just the more able readers in each room. In the individualized reading program, as distinguished from the basal program, no reliance was placed on a single or common set of systematically prepared graded readers for all to use. Instead, broad and varied reading resources were utilized.

The mean differences computed from standardized reading tests indicated that the children gained more during the first period when most used the basal reading pattern; however, even the children who started with the individualized pattern (one group) also gained more. All children made smaller gains during the second period when most were using the individualized pattern.

The results of the second phase of the study, which followed in 1957-58 with groups of the same children who had been tested in 1956-57, indicated that the group which had some individualized instruction during the two years had the highest achievement scores. (7:185-190). The investigators concluded that individualized instruction appeared to increase the reading development of able readers by broadening the scope of reading development. This corroborates the findings of Anderson and Zirbes (3:50).

Varied reactions occurred among the five teachers who initially undertook individualized instruction in 1956-57 and in 1957-58. Three of the five felt that individualized instruction constituted a better approach to teaching reading to abler children. Of the other two, one was undecided as yet about the relative merits of the two patterns, and the other concluded that basal instruction was the better pattern (7:185-190).

Greenman and Kepelian experimented with the two patterns at the third and fourth grade levels. A total of fifty-four children were used. Two third and two fourth grade classes were used as control groups. The control groups followed the basal reading pattern. The children were given standard achievement tests at the beginning and at the end of the year. Informal diagnosis was also used. The findings substantiated the results of the experimental study of Bohnhorst and Sellers in that a wide range in scores occurred at the upper end of the intelligence quotient scale. The investigators felt that the individualized reading program possessed values which were of a subjective and intrinsic nature, such as (1) increased motivation to read, (2) more interest in a variety of reading, (3) lack of grouping stigma, and (4) a relaxed and pleasant reading hour (15:234-237).

A doctoral dissertation done by Walker in the public school system of Lansing, Michigan, was one of the more carefully controlled studies in the research on individualized reading. Two groups of children in grades four, five, and six were matched for: (1) reading ability, (2) intelligence, (3) chronological age, and (4) socio-economic status. Both groups were taught reading by student teachers under the guidance of the supervising teachers. One group followed a basal reader pattern of instruction with basal readers and workbooks with follow-up exercises, while the other engaged in individualized reading instruction. The test data, at the end of the school year in June 1956, showed no significant difference in the reading achievement scores of the control or the experimental children.

The study may be questioned on the basis that the reading instruction was carried out by inexperienced student teachers. Would the findings of the study have been different had the reading instruction been done by the supervising teachers (46)?

Carr explored in her dissertation twenty third and fourth grades to discover how skills and

abilities were developed in individualized programs. Her observations were compared with recommendations made by six authors of major texts on the teaching of reading. She found the teachers strongest in teaching those skills which all authors said were important, and weakest in those about which there was some controversy as to their importance. The study raised questions as to the conventional sequence of time and place of certain skills, yet verified that skills actually were taught in the individualized pattern (8).

Many articles reporting research on the part of teachers, principals, and supervisors have been reported in the past ten years. For the most part, these studies may be grouped into two categories: (1) those telling of individualized reading patterns including procedures, methods and materials, and (2) others of a more experimental nature that describe gains made by groups under individualized reading instruction.

It would seem to the writer, from the evidence presented, that there is not a dearth of basic controlled research evaluating the individualized reading pattern.

What Basic Controlled and Action Research Is Reported in the Literature concerning the Basal or Group Type Reading Activity?

Basic research dealing specifically with the basal reading pattern seems limited. Most of the research concerns methodology inherent in the teaching processes of basal textbook instruction as: (1) the use of the synthetic or the analytic method, (2) the balance of oral and silent reading, (3) the sequence of development of word recognition skills, and (4) the development of study skills.

Research, primarily in the form of surveys (14), has indicated that most of the nation's schools use varying patterns of basal textbook instruction. Action research in the basal pattern has been mainly limited to finding more satisfactory ways of meeting the needs of the individual through experimentation with classroom organization on and through the adaptation of materials to meet specific grouping procedures.

Lazar has pointed up this lack of research:

Critics seem worried about the lack of scientifically controlled experimental evidence regarding individualized reading. My question is, why have they not expressed the same fears about the basic reader systems? What scientifically controlled experiments have proved that any one basic reader system is best? There are many such series or systems, and they are not comparable. The New York Bureau study of vocabulary control exploded the theory that there is

any real commonality of word sequence from series to series. Yet all basic reader systems are accepted as equally good (27).

The best way in which to group children for the purposes of basal reading instruction still merits further study, as does the basal reading pattern. The research, as yet, is inconclusive.

Criticism Number Two: Individualized Reading Cannot Be Used with All Levels of Ability

Some questions asked about this problem have included: Are pupils of average ability and those below average able to set forth in reading on their own? Would they not profit more by group work under teacher guidance? Is there not always a group of pupils, in any classroom, who need the same training in reading skills?

The question of the slower reader versus the bright reader in individualized reading has been raised many times. Action research accounts of the success of this pattern with the slow learner have been issued by the New York Public Schools (28).

Grace Garretson reported on this problem and how it was solved in the Whittier schools at the 1954 Claremont Reading Conference (12).

Zirbes found brighter children profited more from independent silent reading and immature children from intensive instruction in reading. She also reported that pupils who had learned to read simple materials with ease and understanding and who had the opportunity of extensive individualized reading experiences made more rapid progress than pupils of equal reading ability who did not engage in such reading (50).

Similar results were secured by O'Brien and McWilliams. After a study involving fifth and sixth grade children, O'Brien concluded that normal and bright children seem to require less mechanical and remedial instruction than immature learners who need more than interest and wide reading to increase their reading abilities (35).

Contrary to the findings of the above studies, Jones found that individualized instruction appeared to be more beneficial to the slow or average in ability than to the superior students (24). Bonhort and Sellers concluded that individualized instruction appeared to increase the reading development of able readers by broadening the scope of reading development (7). Sartain found that the more able pupils achieved as well in either pattern, but the lower groups of pupils made higher gains under ability grouping (41).

The question might well be asked, can the values accruing from individualized reading in the form of reading skills be measured in a study of short duration as are most of the studies

reported? Because of the nature of the instruction, the emphasis upon children's seeking and pacing, improvement may not be immediately discernible or amenable to short term evaluation.

Current research reveals that this area is in controversy and no definitive answers are as yet available.

Criticism Number Three: Individualized Reading May Succeed in the Upper Grades but not in the Primary Grades because These Children Need the Basal Readers to Introduce them to Reading.

In an early and classic investigation, Gates studied the outcomes of a year of first-grade school work carried on in one group by an opportunistic method and in another group by a modern systematic method. The "systematic method" followed a course of study that was outlined and organized. The study of definite lessons was prescribed, and daily lessons were carefully arranged. The order of sequential development of topics and skills was rigorously adhered to.

The "opportunistic method," here called, but resembling what we now call the individualized pattern as evidenced by its definition, aimed to conform to the interests of the pupils and less to a definite program of studies and activities. To a greater extent the teacher awaited, and attempted to utilize, the pacing and seeking behavior of the pupils to learn to read, write, and spell.

This study has been cited often as evidence of the clear superiority of systematic instruction over opportunistic methods in the teaching of reading, especially at the primary level. But its conclusions were offered with a careful word of caution:

If ability to read—if achievement objectively manifest—were the only criterion, the systematic method might lay claim to superiority . . . for the development of interest and enthusiasm in reading and other school activities, for the improvement of initiative, determination and other traits, for the general improvement of inappropriate habit tendencies, immaturity, and the dispositions toward inhibitive mental adjustments, for the stimulation of healthful mental and temperamental growth in general, which is superior, the method which achieves the goal of reading ability by aggressive behavior or the one which lingers to secure it by a smoother, even if delayed route? This is the question we cannot fully answer . . . We are, therefore, unwilling to make the statement that our data indicate that one method is better than the other in any ultimate sense . . . (17:164).

The McChristy study was done with eight second-grade classes over a period of one year. It was concluded that second-grade pupils were able to choose from appropriately stocked

classroom libraries reading material which promoted their reading growth and that self-selection in reading may be used successfully at the second grade level (32).

Karr's study at the third grade, if you include this grade in the primary group, showed that the children who participated in group procedures made slightly greater gains in vocabulary and comprehension than did the children in the individualized reading group (25).

The results of Anderson's study of the basal group in a public school and an individualized group in a university demonstration school showed the basal group at the end of the primary grades to be significantly better despite a ten point intelligence quotient handicap. Ruling out intelligence as a factor in the differences between the schools at the primary level, the investigators hypothesized a difference in the method of teaching reading was involved. It appeared that the basal pattern employed by the public school enabled the children to learn to read early and reduced the individual variation in age of learning to read. Conversely, the informal pattern used by the university school apparently delayed the age of beginning reading and maximized the individual variations which occurred in this connection.

The results of the study indicated that the difference in the two methods does not have lasting effect and reading can be taught successfully either way (3).

The writer's study conducted at the primary level showed conclusive gains in achievement for children subjected to three years of individualized reading as compared to those with three years of basal instruction (43).

Hilson and Thomas, in their experimental study at the first-grade level and on the basis of the test results, concluded that the individualized reading program was neither more nor less effective than the basal textbook pattern (19).

The criticism that individualized reading cannot be taught successfully at the primary grades is refuted in some controlled studies and others substantiate the criticism.

Criticism Number Four: The Skills Are Neglected in Individualized Reading because there Is no Rigid Sequential Order Suggested.

According to reports of individualized reading instruction, training is given as needed, or during individual conferences, or in groups where pupils have specific needs in common. We need to know more about how the individualized pattern would aid the child with a severe reading deficiency or how a teacher handles problems in word recognition.

There is not much research to answer these questions in basal or individualized reading. Teachers of all grade levels in the reading classes taught by the writer appear to be confused and lacking in knowledge of the skills usually included in the area of word recognition. They also appear to lack understanding of the teaching sequence suggested by the manual for the basic series they are using.

For example, during the past year the writer has been using the *Test of Phonics Principles* developed by Dr. I. E. Aaron of the University of Georgia. In this test of sixty items, teachers are asked to select from five possibilities the correct pronunciation of a sound represented by a letter or a combination of letters within a larger "nonsense" word. This test was designed to get an idea of how well the teacher can apply principles of phonics. It was devised around eight principles of phonics that ordinarily are taught to children who are working with basal readers on second and third-grade difficulty levels. The eight principles are listed below:

1. Vowels in open syllables (those ending in vowels) usually have long sounds.
2. Vowels in closed syllables (those ending in consonants) usually have short sounds.
3. In short words ending in *e*, the *e* is silent and the preceding vowel usually is long.
4. When two vowels come together, the first is usually long and the second is usually silent.
5. When *c* comes before *e*, *i*, or *y*, it usually is soft; otherwise it is hard.
6. When *g* comes before *e*, *i*, or *y*, it usually is soft; otherwise it is hard.
7. The sounds of vowels followed by *r* usually are modified.
8. When *a* is followed by *l*, the *a* usually is neither short nor long.

The experience of the writer in working with teachers in reading classes, student teachers, and teachers in training schools, has led to the observation that the skills are not being taught with much meaning or sequence on the part of most teachers whether the reading pattern is basal or individualized. The fault would seem to be not with either pattern of reading instruction, but with the assumption of advocates of both patterns that teachers know or have been taught the principles of phonetics and structural analysis. Dr. Aaron's study and the writer's experience in using the instrument of his study show that such an assumption on the part of educators is open to question.

The recently completed Harvard-Carnegie Reading Study conducted to determine "how colleges and universities in the United States are now preparing tomorrow's teachers of reading . . ." has listed among the twenty-two recommendations these two: (1) that college instructors continue to emphasize that no one method of word recognition, such as phonetic analysis, be

used to the exclusion of other word attack techniques, and that students be exposed to a variety of opinions related to other significant issues of reading, such as grouping policies, pre-reading materials, techniques of beginning reading instruction, and teaching machines; (2) that college instructors take greater responsibility in making certain that their students have mastered the principles of phonetic and structural analysis (4). It is how and when the skills are introduced that matters. Not every child needs to learn every skill with every other child at the same time.

To teach the skills in this manner means that teachers, pre-service and in-service, must first know these skills. More research will then be needed to determine the validity of the criticism that in the individualized pattern the teachers cannot adequately teach the word recognition skills.

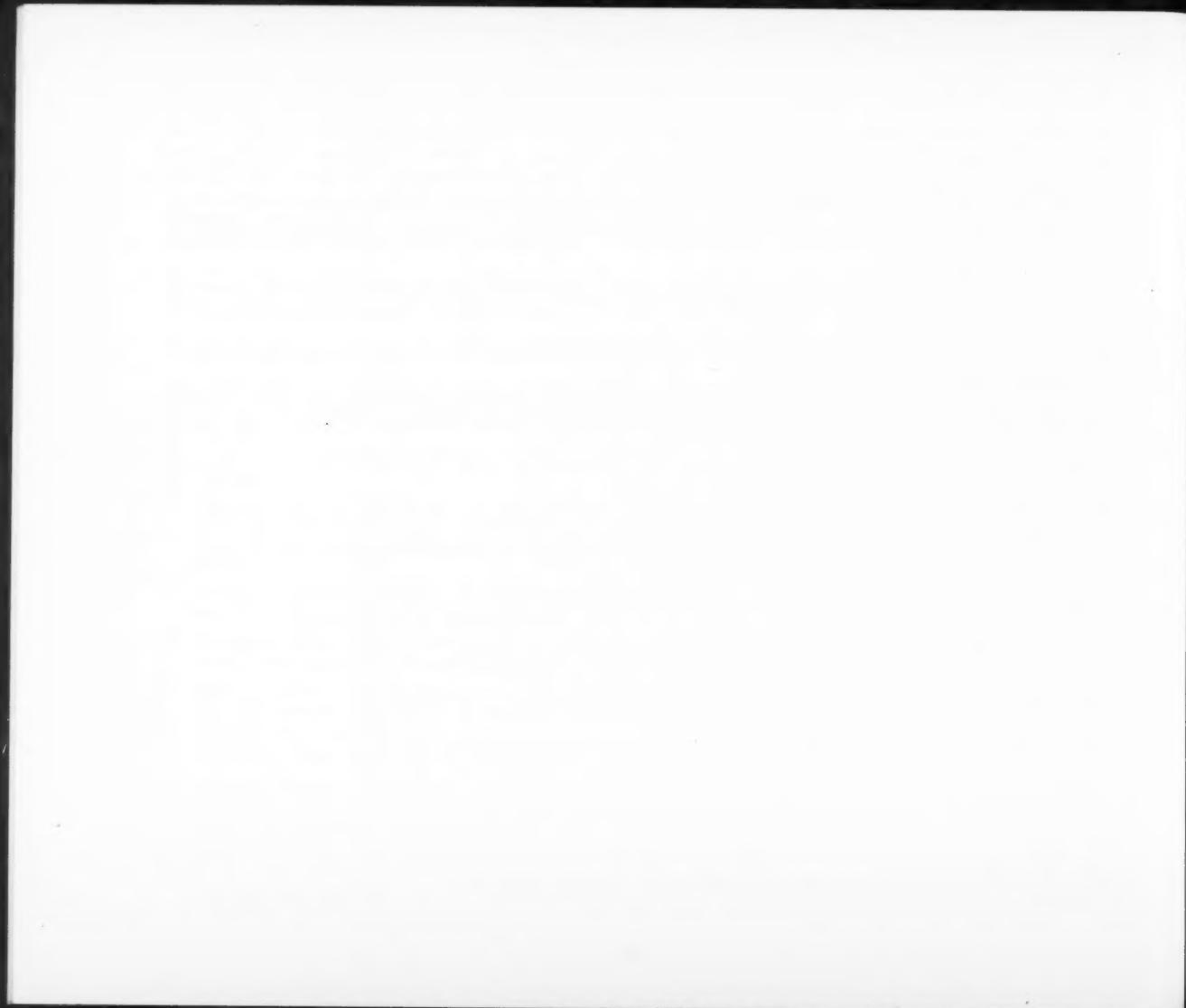
BIBLIOGRAPHY

1. Aaron, I. E., Francis Goodwin, and Vada Kent. "Fourth Grade Teachers Experiment with Cross-Class Grouping for Reading Instruction," *Elementary English*, Vol. 36, No. 5 (May 1959), pp. 305-307.
2. Acinapuro, Philip. "A Comparative Study of the Results of Two Instructional Reading Programs and Three Ability Group Patterns." Unpublished doctoral dissertation, Teachers College, Columbia University, New York, 1959. Abstracts.
3. Anderson, Irving H., and others. "Rate of Reading Development and Its Relation to Age of Learning to Read, Sex, and Intelligence," *Journal of Educational Research*, (March 1957), 50:481-494.
4. Austin, Mary C., et. al. *The Torch Lighters, Tomorrow's Teachers of Reading*, Massachusetts: Harvard University Graduate School of Education, 1961, 191 pp.
5. Betts, E. A. "Developing Basic Reading Skills Through Effective Class Organization," *Education*, (May 1958), pp. 561-576.
6. Board of Education of the City of New York, Bureau of Educational Research. "Problems in Individualized Reading," (July 1959). 36 pp. (Mimeographed.)
7. Bohnhorst, Ben A., and Sophia N. Sellers. "Individualized Reading Instruction vs. Basal Textbook Instruction: Some Tentative Explorations," *Elementary English*, (March 1959), 36:185-190.
8. Carr, Constance. "Individual Development of Skills and Abilities in Reading." Unpublished doctoral dissertation, Teachers College, Columbia University. New York, 1958. Abstracts.
9. Dolch, E. W. "Four Methods of Teaching Reading," *Elementary English*, (February 1954), 31:72.
10. ———. "Groups in Reading," *Elementary English*. Vol. 31, No. 8, (December 1954), 477-484.
11. Durrell, Donald D. *Improvement of Basic Reading Abilities*. New York: World Book Company, 1956, 407 pp.

12. Garrettson, Grace. "How One School Meets the Needs of the Slow Reader," *Nineteenth Yearbook, Claremont College Reading Conference*. Claremont, California: Claremont College Curriculum Laboratory, 1954, 59-68.
13. Goodlad, John I. "Appraising New Patterns of Organization for Reading Instruction," in *Reading Instruction in Various Patterns of Grouping*. Supplementary Educational Monographs, No. 89, University of Chicago, 1959, pp. 20-25.
14. Gray, William S. "The Evolution of Patterns of Instructional Organization," in *Reading Instruction in Various Patterns of Grouping*. Supplementary Educational Monographs, No. 89, University of Chicago, December 1959, pp. 14-19.
15. Greenman, Ruth, and Kepelian, Sharon. "Individual Reading in Third and Fourth Grades," *Elementary English*, Vol. 36, No. 4, (April 1959), 234-237.
16. ———. *Meeting Individual Needs Through Reading*. Third Annual Reading Conference, Sacramento State College Council, International Reading Association, Vol. 1, 1958, 42 pp.
17. ———. "Role of Group and Individualized Teaching in a Sound Reading Program," *Reading Teacher*. Vol. 11, No. 2, (December 1957), 99-104.
18. ———, William J. Iverson. "What Should Be the Professional Attitude Toward Lay Criticism of the Schools? With Special Reference to Reading," *Elementary School Journal*, 53, (September 1952), 1-44.
19. Heyl, Helen. "Grouping Within the Classroom," in *Reading for Today's Children*. Thirty-fourth Yearbook, The National Elementary Principal, Vol. 35, No. 1. Washington, D.C.: National Education Association, 1955, 83-86.
20. Hildreth, Gertrude. "Reading Programs in the Early Primary Period," *Reading in the Elementary School*. Forty-eighth Yearbook, National Society for the Study of Education, Part II. Chicago: University of Chicago Press, 1949. 339 pp.
21. Hunnicutt, C. W., and William J. Iverson. *Reasearch in the Three R's*. New York: Harper and Brothers, 1958. 439 pp.
22. Jacobs, Leland B. "Individualized Reading Is Not a Thing!" in *Individualizing Reading Practices, Practical Suggestions for Teaching*, No. 14. New York: Teachers College, Columbia University, 1958, 11-14.
23. Johnson, Eleanor. "Individualized Reading," *Curriculum Letter* No. 35, Wesleyan University, Middletown, Connecticut. 4 pp.
24. Jones, Daisy M. "An Experiment in Adaptation to Individual Differences," *Journal of Educational Psychology*, Vol. 39, No. 1 (January 1948), 257-272.
25. Karr, Harold, "An Experiment with an Individualized Method of Teaching Reading," *Reading Teacher*, 7 (February 1954), 174-177.
26. Karlin, Robert. "Research in Reading," *Elementary English*, Vol. 36, No. 3, (March 1960), 174-183.
27. Lazar, May. "Individualized Reading: A Dynamic Approach," *Reading Teacher*, 11 (December, 1957), 75-83.

28. ———. *Individualized Reading: Interim Report for the Year September 1956-June 1957*. Board of Education of the City of New York, Bureau of Educational Research, 26 pp.
29. ———. "Individualized Reading: A Program of Seeking, Self-selection and Pacing," in *Reading in Action*, 2: 141-144, 1957.
30. Martin, William B. "Effects of Ability Grouping on Achievement." Unpublished doctoral dissertation, George Peabody College for Teachers, Nashville, Tennessee, 1958. 208 pp. Abstracts.
31. Maury School Staff, Richmond, Virginia. *Teaching Reading in the Elementary School*. Richmond: Hinds, Hayden, and Eldridge, Inc., 1941. 42 pp.
32. McChristy, Antoinette. "A Comparative Study to Determine Whether Self-Selective Reading Can Be Successfully Used at the Second Grade Level," Unpublished master's thesis, University of Southern California, Los Angeles, 1957. 90 pp.
33. McCullough, Constance M. "What Does Research Reveal About Practices in Teaching Reading?" *English Journal*, 46: 475-490.
34. Olson, Willard C. *Child Development*. Boston: D. C. Heath Company, 1959. 497 pp.
35. ———. "Individual Differences: A Precious Asset," *Educational Leadership*, Vol. 15, No. 3, (December 1957), 142-143.
36. ———. "Redefining the Tasks of Education," *Educational Leadership*, Vol. 9, No. 4, (January 1952), 219-224.
37. Palmer, Delores. "To Determine the Reaction of a Fourth Grade to a Program of Self-Selection of Reading Materials." Unpublished master's thesis, University of Utah, Salt Lake City (Excerpts Duplicated by the Division of Elementary Education, Office of Los Angeles County Superintendent of Schools, Los Angeles, pp. 1-19).
38. Purcell, Barbara. "Methods of Teaching Reading: A Tri-State Survey," *Journal of Elementary Education*, Vol. 58, No. 8, (May 1958), 449-453.
39. Robinson, Helen M. "Introduction," *Reading Instruction in Various Patterns of Grouping*. Supplementary Educational Monographs, No. 89, University of Chicago, December 1959, pp. 1-2.
40. Safford, Alton. "An Evaluation of Individualized Reading Programs in One District." Unpublished master's project, University of Southern California, Los Angeles, 1958. 116 pp.
41. Sartain, Harry W. "The Roseville Experiment with Individualized Reading," *The Reading Teacher*, Vol. 13, No. 4, (April 1960), 277-281.
42. Sheldon, William D. "Methods for Teaching Reading Adapted to Various Plans of Grouping." *Reading Instruction in Various Plans of Grouping*. Supplementary Educational Monographs, No. 89, University of Chicago, December 1959, 138-143.
43. Sperry, Florence, "The Relationship Between Reading Achievement and Patterns of Reading Instruction in the Primary Grades," Unpublished Doctoral Dissertation, University of Southern California, Los Angeles, 1961, 500 pp.

44. Stauffer, Russell G. "Individualized Reading Instruction—A Backward Look," *Elementary English*, Vol. 36, No. 5, (May 1959), pp. 335-341.
45. Veatch, Jeanette. *Individualizing Your Reading Program*. New York: G. P. Putnam's Sons, 1959. 239 pp.
46. Walker, Clare. "An Evaluation of Two Programs of Reading in Grades Four, Five, and Six of the Elementary School." Unpublished doctoral dissertation, New York University, New York, 1957. 325 pp.
47. Washburne, Carleton. "Is Individual Instruction More or Is It Less Effective Than Class Instruction in Teaching School Subjects?" in *Adapting the School to Individual Differences*. Twenty-fourth Yearbook, National Society for the Study of Education, Part II. Bloomington, Illinois: Public School Publishing Company, 1925, 198-200.
48. Whitcomb, Irene. "Self-Selection in Reading: A Panel Discussion," *Twenty-first Yearbook, Claremont College Reading Conference*. Claremont, California: Claremont College Curriculum Laboratory, 1956, pp. 33-48.
49. Witty, Paul. "Individualized Reading—A Summary and Evaluation, *Elementary English*, Vol. 34, No. 6, (October 1959), 401-412, 450.
50. Zirbes, Laura, Kathrine Keeler, and Pauline Miner. *Practice Exercises and Checks on Silent Reading in the Primary Grades*. New York: Lincoln School, Teachers College, Columbia University, 1925. 66 pp.



Some Considerations on Vision Screening in Public Schools

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"The importance of good vision to the optimal development and education of all children is widely attested by the laws requiring periodic vision testing of school children." (3) So states Dr. Leslie Corsa, Jr., Chief, Bureau of Maternal and Child Health, State of California Department of Public Health. Roy E. Simpson, Director, State of California Department of Education, states that "California public schools make every endeavor to offer equal educational opportunities for all educable persons. To insure favorable learning conditions for all, appropriate measures are taken to make certain that no pupil is handicapped by physical impairments that can be remedied by treatment, corrected through the use of aids such as eye glasses, or compensated for through the use of special techniques of instruction." (1)

Thus, the two leaders in Public Health and Education agree upon the importance of vision in the learning processes of our children.

We could go a step further and also agree with Gesell, who states that vision is the key to the child's whole individuality . . . To understand the child, we must know the nature of his vision (5). Vision does affect the performance of the whole child in his school activities, in his performance and adjustment to society, and in his health and welfare in general. Vision also holds a direct relationship to safety . . . recreation . . . and to achievement. Although research on the relationship between vision and reading proficiency produces conflicting evidence, there is some support for the belief that poor vision is a handicap (14).

There is also a startling relationship found to exist between reading difficulties and juvenile delinquency. A very high percentage (80%) of these children have not achieved satisfactorily in reading (11).

Probably vision is not the sole factor in any area of difficulty, but it does play a very important role in the child's ability to achieve and adjust to our complex modern society. There-

fore, it is of utmost importance to seek out those children who are in need of professional vision care. This weeding out process may be accomplished by an adequate vision screening program.

The two primary objectives of a vision screening program for school children are (3):

- 1 To detect those children who have vision problems, or potential vision problems, that may affect the physiological or perceptive processes of vision.
2. To find those children who have vision problems that interfere with, or may interfere with, performance in the school.

These two objectives are different in that the screening should not only concern itself with the immediate problem of the child's ability to perform in the classroom, but to consider his vision status for recreation, play and safety away from the school. In addition, the procedure should consider future visual requirements toward potential vocational and recreational interest. An existing visual handicap may not interfere with school performance but may be the determining factor in future activities. Professional care and guidance are often most essential in these latter considerations.

Many states require the governing board of each school district to provide for the testing of the sight and hearing of pupils. Most merely require that the test shall be adequate in nature. The laws do not spell out what is an adequate test nor do they mention frequency. There has been considerable research on what constitutes an adequate screening procedure. However, not until The Orinda Study (3) was undertaken had there ever been an inter-professional research considering all aspects of the matter.

This research covered a three year period and made a comparative study of existing vision screening methods on more than a thousand school children in Orinda, California. Parents, teachers, nurses, technicians, school and public health officials, optometrists, and ophthalmologists worked cooperatively to complete the study. The study received active support from the School of Optometry at the University of California, the School of Medicine at Stanford University, the California State Department of Public Health, and the Children's Bureau of the United States Department of Health, Education, and Welfare.

Most previous researches have included some of the items considered in The Orinda Study (3), cost, time, etc., but The Orinda Study was unique in several respects. First, the inter-professional study staff sent questionnaires to 630 optometrists and 500 ophthalmologists to establish professional opinion on the criteria to employ as "cut off" points for referral. Second,

a control group of more than 200 children was thoroughly examined at both the School of Optometry, University of California and the School of Medicine at Stanford University. Third, an evaluation was made on all data recorded and cards were reviewed by the study committee to determine the existence of the under-referrals, that is those children who were in need of professional attention, but were passed favorably by the particular screening method employed. Previous studies referred to the number or percentage of children selected by a screening procedure but rarely investigated those children who were passed but needed professional attention. Earlier studies indicated the number and percentages of children who were selected but who were found upon professional examination not to be in need of care. These are over-referrals.

The findings of The Orinda Study (3) point conclusively to the Modified Clinical Technique as being the most effective method of screening elementary school children for vision problems. To warrant this rating the Modified Clinical Technique was determined to be the least expensive, less time consuming, and the most accurate method of detecting those children with existing or potential vision anomalies.

Some methods were slightly less expensive but missed a high percentage of children that should have been referred for professional care. This means that those children who were missed would be considered by both the parents and the teachers to possess adequate vision capabilities when actually a vision problem did exist. The methods that refer children as having a vision defect when actually none exists cause all concerned, especially the parent and child, to lose confidence in the entire screening and testing program of the school . . . including tests of IQ, hearing, achievement, etc.

Thus, it is apparent that a poor vision screening method employed by a school could in one instance be of no value to the child or school and, on the other hand, could jeopardize all other testing or screening programs being carried on by the school.

Any vision screening to be adequate in nature must consider more than a mere Snellen rating. Dr. Maurice Woolf, Professor of Education at Kansas State College, very aptly stated that "Some visual problems interfere so acutely with the improvement of reading skills that some sort of visual screening device should be employed. The Snellen eye chart has two disadvantages. The test is given at a distance of 20 feet instead of at the usual reading distance. Some people are able to fuse at the far point (20 feet) but not at the near point where fusion is needed for reading" (14). A third disadvantage not mentioned by Dr. Woolf is that the findings of the Snellen chart are frequently very misleading, giving the parent and the school informa-

tion possibly detrimental to the well being of the child. He could still have a reading problem due to muscular imbalance at the reading range but have "perfect" vision according to the distant Snellen ratings.

As recently as March 4, 1961, Dr. Henry Peters presented a paper on vision screening with a Snellen chart wherein he stated that although the Snellen test seems simple, it is really a complex psycho-physical measurement involving perception, judgment, and knowledge, as well as the optics of the eye and the physiology of the photo receptors and nervous system (8). Frances Adams in a "Reference Paper on Children's Visual Perceptions and Beginning Reading" also concluded that many perceptual factors contribute to reading (10).

Therefore, merely having a child, under many varied conditions of testing, read a chart on a wall at 20 feet does not rule out an existing or potential vision problem. Vision includes not only seeing but perception, interpretation, and a capacity to follow or read the printed word over a span of time as would be required in study. The Snellen chart is composed of letters or tumbled E's arranged in graded sizes. Each row of letters carries a notation of 20/20, 20/30, 20/40,—usually to 20/200 or 20/400. The upper number denotes the distance at which the test is given, i.e. 20 feet. The bottom number denotes the distance at which that letter subtends an angle of five minutes of arc—the detail of the letters subtending an angle of one minute of arc. The notations are not fractions except in their manner of notation. There is no argument against the Snellen rating being a valid test in determining or estimating the visual acuity at a six meter distance (or 20 feet). The argument is in using these findings as the only measure in testing the vision of an individual and in attempting to relate the findings to the effectiveness of this method in determining which children should be referred for professional attention. Peter's study (8) concludes that the Snellen test is not an adequate or efficient method of finding those children in an elementary school population who have vision problems. In using the Snellen test in vision screening, the higher the acuity standard required to pass, the greater the number of correct referrals identified, but also the greater the number of unnecessary referrals. If the standards are lowered to reduce the number of unnecessary referrals, then fewer of the correct referrals will be identified. If 20/40 is the screening cut-off point, 95 per cent of those who fail will be correct referrals but 53 per cent of those who actually need professional attention will pass undetected. Not all reduced acuity indicates a vision problem, nor does every vision problem affect visual acuity. The visual characteristics of those who pass and those who fail Snellen visual acuity screening are explored in detail (8).

An examination of the professional opinion of optometrists and ophthalmologists indicates that the definition of a referable vision problem cannot be restricted to a particular level of visual acuity. The Snellen visual acuity screening will "pass" significant numbers of children with vision problems, problems which most optometrists and ophthalmologists would agree should be referred. It is obvious, therefore, that the Snellen test is not an adequate screening test of vision.

A screening method to be adequate must provide information concerning *at least* the following areas of visual performance.

1. Visual Acuity: To determine what, but not how, the child sees at distance.
2. Coordination: (Both at distance and at the reading range of 12-16 inches): To determine the muscle coordination of two eyes working together at visual tasks.
3. Refractive Status: To determine if the eye is farsighted, nearsighted, astigmatic, and what difference, if any, exists between the two eyes.
4. Organic: Is the eye and all its structure healthy and anatomically sound?

The most accurate estimates indicate that in 1955 in the United States children with eye problems of some kind which necessitated referral for professional attention numbered about one in four in the elementary school group (12). The Orinda Study (3) disclosed that 17% were in need of eye care at the first grade level—the net increase in the number with vision problems averaging 1.6% of the total group per year. A recent study at Bradley University reveals that almost two-thirds of all of the freshmen (61.9%) had corrected or uncorrected vision problems upon entering college, and more than one third of these had unsuspected vision problems (9). McClenlland, on the basis of work with students over a period of several years in three colleges, has reported data showing that some 60% of all students of the college level might well be in need of vision care as a prerequisite to improvement in their studies, health, or emotional stability (11).

Referring back to the 1955 estimates (12) we find that children who are handicapped by injuries or malformations of eye structure, or by brain damage, rendering them blind or partially-seeing, number as follows: Blind children (those having an acuity of 20/200 or less with best correction) number one in 5,000 in the school age group and one in 4,000 in the preschool group.

Partially-seeing children (those with corrected vision no better than 20/70) number one in 500, both in the preschool and school age groups.

Although great progress has been made in the prevention of blindness, the total number of children with vision anomalies seems to be increasing. It is believed that this is due largely to the steady increase in the total child population and possibly also to the fact that a greater number of children are surviving infancy.

The problem is with us and apparently to stay. The solution is to detect and correct vision problems wherever possible at the earliest practicable time. This should be preferably before the child progresses too far in his school years. Optimally all children should have a professional eye examination by a qualified optometrist or eye physician prior to his entering school. Since this is not practical for many reasons, we must then employ an effective screening program in our schools, preferably starting at the kindergarten level.

An effective program can be easily accomplished by an inter-professional team approach. Parents, teachers, administrators, the school nurse, and the eye care specialists of medicine and optometry in the community would be the minimum members for an advisory committee. This committee could and should be augmented to include such people as school psychologists, pediatricians, public health administrators, vocational rehabilitation counselors, and teachers in special classes offered to the blind and partially-seeing, and in remedial reading. Vision, as stated previously, is not merely the determination of whether the child sees the characters on a Snellen chart at 20 feet, or in the correction of existing refractive errors to improve upon this function—but rather vision is a complex matter involving the physiology and bio-chemistry of the eye itself, the eye movements in controlling each eye which involves the voluntary nervous system, the neurology of the visual pathways, and the occipital cortex wherein two separate images from each eye must be similar in size, shape, and intensity to permit fusion of these images into one image which is projected out into space toward the object of regard. This total process (2) should function with ease and efficiency under any required task.

Most vision screening in our schools today is performed in the manner of placing the "cart before the horse." The school nurse, or teacher, performs the screening by some method or gadget and refers the child to an examiner who most often does not know fully the method or criteria employed by the referring agency. He receives the child "cold," examines him, and may or may not advise the school of his findings and recommendations. In most instances the only way the nurse, or teacher, knows whether or not the child was correctly referred is if the child returns to school wearing glasses (if no glasses, incorrect referral, if glasses, a correct referral). But it ends here as a closed case unless the child is re-screened at some subsequent time.

By the team approach all interested groups would be informed of these essential items since they would have assisted in their formulation:

1. The technique or method used.
2. The cut-off points which determine the basis for referral.
3. The qualifications and training of the screeners.
4. The referral forms to the doctor stating the reasons for referral, with a portion of the same form to be completed by the doctor for return to the school carrying his findings and recommendations.
5. A method for follow-up and re-evaluation.

No vision screening program should be conducted in a school unless there are avenues open to allow for inter-professional communication and evaluation of the screening being conducted. Vision screening should be only one phase of an overall school program of vision conservation.

Vision screening and vision health education go together to make for a program of vision conservation. Without vision education you are only doing a partial screening program, regardless of how effective the method employed.

The reason many schools do not have an adequate vision screening program is threefold:

1. They are not using an effective method.
2. They have a very poor vision health education program or no program at all.
3. They have not taken advantage of existing knowledge by using the team approach.

Perhaps the main reason why none of the above has been initiated was stated by Dr. Paul B. Kinney, Chief Physician and Director of Health Education and Services, Pasadena City Schools, Pasadena, California: "I suggest to those young in school health that you give serious consideration to an occupational disease called 'change resistance'—you are in jeopardy if you stubbornly and blindly follow yesterday's school health examination program—the only difference between digging a rut and digging a grave is one of depth, and you can be buried in either—I am personally more concerned over the implication that there are school health programs still operating as in the dark days. Change resistance is a viral disease, the symptoms of which are either apathy or rebellion toward modern thinking, altered trends and disturbed 'status quo'." (7)

Also Dr. Martha Eliot, former Chief of the U. S. Children's Bureau, recently stated, "There

is no more important subject to which we can address ourselves than the essential need for a multi-professional approach to the problems of children."

We in optometry have many publications, pamphlets, studies, and research material on the importance of vision—as do the departments of public health, education, medicine, and far too many other organizations and societies to list here. Optometry is an art and science dedicated to the conservation of vision; ophthalmology is an art and science dedicated to the medical prevention of blindness and the many injuries, diseases, and accidents to the eye. The Lions' Club and many similar groups make outstanding contributions toward vision conservation. Working together for the betterment of our vision conservation programs in our schools we could do much more, with greater effectiveness, to insure the vision health of our entire society.

My assignment was to present to you some considerations for an adequate vision screening program in public education. Men with whom you are more familiar, Clark (4), Gray (6), Traxler (13), and other authorities in the field of reading concede that effective vision does have an important role in the overall process of reading. You as educators must therefore be the leaders in developing a much needed program of vision conservation, of which vision health education and adequate vision screening programs are inherent components.

In summary, I repeat:

1. The need for adequate vision for all children is agreed.
2. Vision involves more than one's ability to read letters of a given size placed upon a chart 20 feet from the observer.
3. Findings from screening via the Snellen chart bear no correlation to a child's ability to achieve visual tasks at 14-16 inches.
4. Prior to performing any screening in schools a proposed program of vision conservation must first be outlined and presented to the multi-professional groups whose representative members make up a school health vision committee.
5. Also, prior to performing screening the inter-professional school vision committee should formulate a vision health education program directed to the school administrators, teachers, vision care specialists, parents, students, and the community as a whole.

You have at your disposal the tools to assist in establishing an adequate vision screening program. Optometry, as are the other interested groups, is ready and willing to serve on your

inter-professional committee. The Modified Clinical Technique has been used on more than 100,000 California school children during this current school year (1960-1961), and is without reservation an approved vision screening technique.

Dr. J. Bruce Jessup, widely known Stanford University pediatrician, stated in a recent talk that "We know more than we do." Let us, optometry and education, and other interested groups who would join with us, show by our joint efforts that we can do as much as we know . . . to enable our children and youth to live a life of freedom and dignity.

BIBLIOGRAPHY

1. *A Guide for Vision Screening of School Children in the Public Schools of California*. California State Department of Education, Sacramento, 1953.
2. Bing, Lois B. *The AOA Policy on School Vision Screening*. The Journal of the American Optometric Association. Vol. XXVIII, No. 8, March 1957.
3. Blum, Henrik L., Henry B. Peters, and Jerome W. Bettman. *Vision Screening for Elementary Schools*. The Orinda Study, University of California Press, 1959.
4. Clark B. *Binocular Anomalies and Reading Ability*. American Journal of Ophthalmology. Vol. 23, 1950.
5. Gesell, Arnold, Francis L. Ilg, and Glenna Bullis. *Vision—Its Development in Infant and Child*. Harper and Brothers, 1949.
6. Gray, William S., et al. *Reading*. Rev. Educ. Res., Vol. 7, December 1957.
7. Kinney, Paul. *Today's School Health Examinations*. The American Public Health Association, School Health Section, November 1, 1960.
8. Peters, Henry B. *Vision Screening with a Snellen Chart*. Presented to: California Educational Research Association 39th Annual Meeting, March 4, 1961, Palo Alto, California.
9. Potter, J. A., Leo G. Bend, Chester R. Zebell. *A Vision Testing Program for University Students*. Journal of the American Optometric Association, June 1954.
10. Reference Papers on *Children's Visual Perceptions and Beginning Reading*. Prepared by Division of Elementary Education, Office of Los Angeles County Superintendent of Schools, October 1960.
11. *Report to The 1960 White House Conference on Children and Youth*. From the American Optometric Association Committee on Visual Problems of Children and Youth. American Optometric Association, 1960, St. Louis, Missouri.
12. *Services for Children with Vision and Eye Problems*. Prepared jointly by the Committee on Child Health of the American Public Health Association and the National Society for the Prevention of Blindness. New York City, N. Y. 1956.
13. Traxler, Arthur E. *Research in Reading*. Journal of Educational Research, May 1949, Vol. 42, No. 7.
14. Woolf, Maurice D., and Jeanne A. Woolf. *Remedial Reading Teaching and Treatment*. McGraw-Hill Book Company, Inc., 1957.



Public School Management of the Sensorially Deprived

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Every human being is born functionally deaf and blind. For months he gropes to bring meaning into the great white unfocussed glare and blare which is his world. Day by day he lives through a universe of new experiences which he welds into his total personality structure. Out of this emerges meaningful perception of his field of view and audition. The degree to which he makes adequate responses to a widening variety of aural and visual stimuli determines the degree to which he will use visual and aural perception as learning tools in the future. Since a large percentage of all learning takes place through these two sense modalities, society must insure that optimum physiological, sociological, and psychological conditions prevail from birth.

Parental responsibility for the continued growth of his child's perceptual ability does not end when the child enters school. However, the teacher must share this responsibility by providing the proper environment for maximum visual and aural development. Here again the psychological, physiological, and sociological factors involved must be carefully provided for.

Because the academic program offered by our public schools is so heavily dependent on information gained through sense perceptions no child must be penalized by their defective operation. Early identification of sensorially handicapped children should screen out those who will need audiological, otological, and special visual attention and/or educational adjustment. Today's schools provide a variety of techniques and materials for proper management of the sensorially handicapped in the regular classroom.

Millions of children in the United States do not succeed in learning to use their eyes and ears well enough to enable them to cope efficiently with the demands made upon them for successful achievement in school, or made by the culture, economy and society in which they will live. There are those children who are handicapped by injuries or malformations of the eye structure,

or by brain damage, rendering them blind or partially-seeing. Blind children (those having acuity of 20/200 or less with best correction) number one in 5,000; partially-seeing children (those with corrected vision ranging from 20/70 to 20/200) number one in 500 (2). These children manifest their problems in unmistakable fashion. Usually they receive prompt professional attention and are helped in school through the establishment of special classes or by visual aids intended to enable them to continue in the regular classroom with specialized assistance. But at least four out of every 10 children in our schools and colleges are visually handicapped in one form or another for adequate school achievement. Aurally handicapped children (deaf and hard of hearing) are reported in the literature to comprise four to seven per cent of the school population nationally. The ramifications noted above apply equally to the subnormal in hearing.

Research completed in the last 10 years indicates that most aurally and visually deprived can be helped physiologically or aided to live successfully with their sensorial problems. To assure a productive life in freedom and dignity for every child we must utilize the know-how presently within reach to detect these handicapped children. We must also provide the professional aid necessary for them to perform effectively in our culture. Society can no longer afford this tremendous waste of human resources. No child should be robbed of his inherent potential because of an undiscovered problem when professional examiners are available to discover them rapidly, efficiently, and economically.

The Modified Clinical Technique of Vision Screening as detailed in The Orinda Study is rapidly gaining acceptance by discerning authorities in the field.* With this same total community philosophy as a base, I will discuss a public school hearing conservation program which has proved effective in a four year period of experience and research.

"To be effective a hearing conservation program must include the following aspects: (1) Prevention, (2) Case Finding, (3) Medical Diagnosis and Treatment, and (4) Educational Adjustment" (3).

Prevention, the first aspect, is brought about through total community understanding. The establishment of area health councils, classroom instruction, and wide publicity all aid in accomplishing this end.

A health council should be composed of multi-professional community people who represent at the minimum the following groups:

*See "Some Considerations on Vision Screening in Public Education," by Joseph E. Farrington in earlier pages of this yearbook (editor).

1. School Research and Guidance
2. School Board
3. Primary and Secondary Teachers
4. School Administrators
5. County Health Department
6. County Superintendent of Schools' Office
7. School Health, Recreation, and Physical Education
8. Pediatrics
9. General Medicine
10. Optometry
11. Ophthalmology
12. Dentistry
13. PTA
14. Community Agencies

Due to the importance of the continuing need for research, study, and evaluation in the areas of vision, hearing, and health education, permanent subcommittees should be established. Without such a structure, community support is lessened and the preventive aspects of hearing conservation are severely curtailed. Through the functioning of the above media the public can be motivated more effectively to utilize the necessary precautions and care to preserve their hearing.

Case Finding, the second aspect, is accomplished by an annual hearing screening test of all school children, grades kindergarten through 12. This test consists of a puretone audiometric sweep check at 15 decibels sound pressure level in the following frequencies: 250, 500, 1000, 2000, and 4000 cycles per sound. This test is designed for early discovery of children with minimal hearing losses. Irreversible hearing losses are greatly reduced through early detection and treatment.

Failure of hearing at any tested frequency demands a complete audiometric threshold test which determines the lowest sound pressure at which an individual can hear certain selected frequencies; criteria for referral from the threshold test should require that the individual register a hearing loss of at least 20 decibels in two frequencies in the same ear or one loss of 30 decibels or more at any single frequency. These criteria are standard nationwide. Failure of such an audiometric evaluation constitutes a basis or referral for examination by an otologist.

It is of extreme importance that the screening and threshold tests be conducted under standard conditions utilizing an environment with low ambient noise levels not to exceed 50 decibels of sound pressure. For these purposes a sound treated mobile unit is highly recommended. "The use of a mobile testing unit and the help of two assistants insure an efficient, economical hearing testing schedule which is paramount to an adequate hearing conservation

program" (1). It has been demonstrated that the efficiency of a mobile unit is well within the criteria set down by DiCarlo and Gardner (4).

All forms and records should be standardized, simple and easy to maintain. This insures maximum use of data collected through the testing procedure. Electronic data processing expedites results most efficiently in large communities.

Medical Diagnosis and Treatment, the third aspect of a hearing conservation program is crucial. The types of hearing losses and their prevalence in the community as determined through medical diagnosis provide the focus of preventive measures. Obviously, case finding is futile without medical diagnosis to determine those cases which are amenable to medical treatment and therefore become the concern of the otorhinolaryngologist. Valid education recommendations cannot be made prior to medical diagnosis.

Children referred for medical diagnosis on the basis of the threshold test should be provided a free otological diagnostic clinic regardless of economic status. The fact that parents must accompany the referred child tends to increase greatly the percentage of those who obtain medical treatment. These clinics operate most efficiently under the joint auspices of the County Health and School Departments with financial aid from the State level.

Upon arrival at this clinic the child should have another diagnostic audiometric evaluation by public school personnel specially trained in this field. It is imperative that a school consultant in speech and hearing should be present during the otological examination to aid the physician in formulating education recommendations which are written into the record at this time. Another important role for the consultant is as an advisor to the child's parents. A social welfare worker should also be part of the clinical team to insure that all children regardless of economic status receive recommended treatment.

A standard record form (made and approved by all interested parties) should be utilized at the clinic to record any therapy, treatment, or subsequent examinations either by the school, clinic, or in the office of the private physician. This form should be retained as an important part of the child's school health record.

Educational Adjustment, the final aspect of the hearing conservation program demands equal attention. Hearing impaired children who cannot be helped further medically become the concern of the educator because of the irreversibility of the hearing loss. School case conferences should be held on every child with a demonstrated significant hearing loss by the following school personnel: principal, teacher, nurse, psychologist, audiometrist, and speech therapist, and

remedial reading teacher, if there is one. This is to consider the most efficient adjustment of the child's school environment. In support of the best school environment obtainable the parents of hearing impaired children should be carefully counseled on the entire matter. Their educational expectations should be tailored to their child's performance level in order to keep to a minimum the possible emotional conflicts of the child as he meets severe academic tests, particularly in language and reading. The situation is complicated greatly when the child enters school since his educational growth may lag as much as two or three years behind the other children of his age. At that time he builds psychological barriers which may prevent normal associations with other children.

Hearing losses have even further ramifications. Individuals with significant hearing defects show a tendency toward poor peripheral vision, social maladjustment, and a modification of their total reactions to their environment.

In conclusion, the importance of vision and hearing in the reading process is steadily supported in the research. Educationally, we can make great gains in the efficiency of our school programs if we but use technology now available. Adequate vision and hearing screening programs must replace outmoded programs now in use in too many areas. Furthermore, educators must recognize that hearing and vision are learned processes and are not native endowments. As Dr. Peter L. Spencer has so often indicated, they are achievements far more than they are endowments. As the defective in hearing needs auditory training in order to interpret the aural stimuli of his surrounds, the visually handicapped needs stimulation, direction, and supervision for full utilization of visual stimuli. These are unquestionably educational responsibilities.

BIBLIOGRAPHY

1. Becker, Bruce M. *The Efficiency of the Mass Hearing Screening Program Conducted by the Sacramento County Superintendent of Schools' Office*. Unpublished Thesis, Sacramento State College, 1960.
2. Bing, Lois B. *Report to The 1960 White House Conference on Children and Youth*. St. Louis, Mo. AOA, 1960.
3. Brennan, Edw. *A study of Clinical Records of 767 Children Referred for Otologic Examination*. Unpublished Thesis, Sacramento State College, 1959.
4. Di Carlo, Louis, and Eric Gardner. "A Comparative Study of the Efficiency of Three Group Pure Tone Screening Tests for Public School Children." *Exceptional Children*, 24, April, 1958, pp. 351-359.
5. Hirsh, Ira J. *The Measurement of Hearing*. New York: McGraw-Hill Book Company, Inc., 1955.
6. Johnston, Philip W. "An Efficient Group Screening Test." *JSHD*, 17 (March, 1952), pp. 8-12.

7. Madden, Richard. *The School Status of the Hard of Hearing Child: Analysis of the Intelligence, the Achievement and Certain Personality Traits of the Hard of Hearing School Child*. New York: Teachers' College, Columbia University, 1931.
8. Myklebust, Helmer R. *Auditory Disorders in Children*. New York: Grune and Stratton, 1954.
9. Newby, Hayes A. "Evaluating the Efficiency of Group Screening Tests of Hearing." *JSHD*, 13 (September, 1948), pp. 236-240.
10. Newhart, Horace. "Audiometric Testing and Hearing Conservation in the Public Schools." *JSHD*, 8, September, 1943, pp. 237-242.
11. Yankauer, Alfred, Margaret Geyer, and Helen Chase. "Comparative Evaluation of Three Screening Methods of Detection of Hearing Loss in School Children." *American Journal of Public Health*, (January, 1954), Reprint.

Aspects of Perceptual Training with Brain Injured and Emotionally Disturbed Children As Related to Reading

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This paper presents a frame of reference for understanding the child with certain learning difficulties followed by a description of some of the methods used by the Dubnoff School in the education of such children.

We often have been faced with the necessity of differentiating between retarded and brain injured children. This differentiation does not hinge on I.Q. alone. The intellectual capacity of the brain injured child may run across the entire scale. His functioning is frequently characterized by extreme scatter and is further complicated by other specific symptomatology, some of which will be discussed.

The classification of brain injury has been divided into two main groups; the exogenous type and the endogenous type. Falling under the endogenous group are the familiar types of mental deficiency which are characterized by simple mental retardation. This implies that the child will function up to and within maximum limits which will always be below his age level. Within the category of the exogenous group are the many types of mental deficiencies which are due to traumatic causes.

Brain injury can be attributed to many causes, before, during, and after birth. The threat of brain injury is very real. It could occur to anyone.

When a diagnosis of brain injury cannot be made on the basis of neurological examination alone, tests for perceptual, conceptual and psychological disturbances are made. Gesell(1) has

said that we should not assume that there has certainly been a cerebral injury but assume that every child who is born alive has run the universal risk of such injury.

READING AND PERCEPTION

Perception, here, may be viewed as that process whereby stimuli from the environment are received by the sensory channels and organized by the central nervous system into appropriate responses. Perceptual development is a long and complex process. The brain injured child experiences perceptual difficulties in one or more of the sensory modalities.

In perception, associations between the percepts from two, or even three, sensory channels are being formed. The information which an average child receives visually, he checks tactually. The sound he hears he also wants to identify visually. The normal child then learns to identify objects in his environment and to relate himself to these objects. He learns to circulate around the furniture in the room, rather than bumping into it; he crawls under it and does not stand up until he has cleared the obstruction overhead; he learns about the space that plunges precipitously downward and masters two levels of space through steps. Thus, orientation of the body in space, muscle coordination—both gross and fine—provide some of the building blocks to all learning and especially to reading.

As the child's percepts are stored in memory, present and past experiences are fused. If a situation or stimulus has been perceived correctly, it will be remembered correctly; if it has been perceived vaguely or not completely, it will be remembered accordingly or not at all. Memory makes it possible for a child to anticipate sequences. He associates his mother getting his coat with an outing and on a higher educational level he will first associate a picture cue with a word and, later, read the word through a memory trace of the cue. Thus, two events, which are discontinuous in reality, become related through central nervous system activity.

The process of perception moves further and further from the sensory stimulus toward a response based on recall of former percepts. We respond to what we assume is there. If the organism lacks the ability to easily differentiate (or discriminate between) two similar percepts, the result can be an error.

The "perceptual event" now includes the actual visual percept, other percepts obtained through different senses, recall of former percepts and the naming of the event (language). These basic inter-relationships have been fairly well established by the time the normal child

is three and one-half years of age. Development is toward greater complexity and finer discrimination.

The normal perceptual process proceeds in an orderly fashion as outlined above. Most perceptual tasks are made by children as an assimilation and an accommodation to the environment. Most children are not formally taught these discrete steps.

EFFECTS OF BRAIN INJURY ON EARLY READING

The child who has either a neurological and/or an emotional handicap may distort, fixate, or skip some of these developmental stages. This necessitates careful evaluation of the child's developmental history and recognition of all levels of his present functioning. A program then has to be developed which insures mastery of the perceptual processes involved in each developmental stage. It is of crucial importance that the program for the handicapped child be broken into minute increments in order to insure a firm foundation for reading and learning generally.

Many disturbed and brain injured children do not encounter overwhelming difficulties until they enter school. Prior to school they may develop a reasonably adequate practical use of space because of greater choices of activities. They could choose those which gave them some reasonably successful experiences. Most pre-school activities have a large kinesthetic element, and they permit checking tactually on the visual percepts. Hence, their problems may not become so sharply focused on their inadequacies.

In school, however, the child begins with material which is almost entirely visual in nature. His handicaps prevent him from learning the things he would be able to learn under other less structured conditions.

We have thus far dealt with some of the developmental aspects of perception. However, the perceptual problems cannot be divorced from the symptomatology of the brain injured child.

Perseveration is one of the most common distinguishing symptoms of the brain injured child. This pertains to the tendency to use a previously acceptable response in situations where the response is no longer appropriate. For example, when a child is introduced to "Jip," the dog, in the *Alice and Jerry*(2) series, all dogs may then be read as "Jip."

In order to break the perseverative pattern in reading we utilize as many cues as we can. Two of the many techniques are: (1) The use of illustrative drawings, which can be used as

matching devices (matching word to picture and picture to word) and as cues to reinforce learning of words. (2) Color cues with emphasis on beginning sounds in words.

Hyperactivity is another symptom frequently encountered with brain injured children. Their hyperactivity differs from that of the normal child, however, in that the normal is purposeful and goal directed whereas the former is without a goal and appears to be motor driven. Hyperactivity is one of the most disturbing factors in the education of these children, for the teacher is unable to keep the child at a given task. This disturbing element can be reduced by the use of several techniques. All good teaching principles are, of course, applicable. One of them is to ascertain the child's level of ability in any given field and to provide him with a task where success can be assured. Each successful effort will spur him on to further achievements. Each task should be one of short duration, so that there is less chance for frustration. Activities even within a given field of endeavor are changed frequently so that the child feels that he is doing many types of work and his interest is kept at a high level. Many types of materials must be provided and are often created to meet the child's specific need.

It is essential that distracting stimuli be kept at a minimum. Reading materials must be prepared in advance so that the child can go from one page to another without waiting—waiting is difficult. He has to have the security of a structured program so that he knows what to expect and when. Changes are also difficult. He has to be switched from paper and pencil work, to work with puzzles and games, to more active projects where his big muscles are used, and then back again to more quiet, sedentary work. In this manner, a child, even a most motor driven one, can be helped to become more receptive to a positive learning situation. The goal is that, eventually, control and direction of the child's behavior comes about from within himself rather than from externally regulated conditions.

An intensive perceptual training program is integrated with the academic training. Often the perceptual training is the academic program. In the perceptual training areas work is usually centered around three-dimensional objects, e.g. toys such as nesting blocks and cups are used to develop size relationships, space perception, motor coordination, color concepts. Form boards, simple puzzles, parquetry blocks, Montessori(3) materials, etc., are used to reinforce the learning in all dimensions. The types of materials used are limited only by the ingenuity of the teacher. Concurrently, many techniques are used to develop the child's orientation of his own body in space. This helps the child to establish laterality, balance, and directional orientation.

Experience has taught us that there is a marked relationship between the child's concept

of his body image and reading. Bodwin(4), among others, conducted a study showing the relationship between immature self concept and reading disability. Using the Draw-A-Person Test, with three hundred subjects, he found a correlation of .72 between immature self concept and reading disability in the third grade, and .62 in the sixth grade. The following techniques help to develop a needed sense of direction, self concept, and body boundaries: Walking board, use of musical activity games involving directional concepts, use of chairs in such a manner that the child goes up and down, over and under, to the right and left. Unless a child is able to establish within himself a sense of right-left direction he is unable to use it outside the body. For him a 'b' and a 'd' may read the same, for example.

Other major areas in the perceptual program are those of figure-ground and form perception. There, again, we may use such objects as puzzles and parquetry blocks. In parquetry, first the design is superimposed on an existing pattern; later, the child learns to transpose the design visually to different surfaces.

Along with the use of concrete materials, the child is taught to use crayons and pencils in preparation for printed word reading and writing. Most commercially prepared workbooks are inadequate for these children. The commercial books are too cluttered; there are too many distractions; exercises are too closely spaced and are too complex; the rate of progress is too fast. The teacher is faced with the almost insurmountable task of creating appropriate materials. In an attempt to help the teacher of the perceptually handicapped, we have developed two workbooks(5) which begin to focus on the discrete steps in the perceptual program.

These perceptual techniques are some of the pre-requisites to help the child in deciphering the hieroglyphics of printed symbols. Latin to some of us would be "hieroglyphics." To quote the "Latin," as used by Professor Hubert C. Armstrong of the Claremont Graduate School faculty:

O ci Billi.

Translation: Oh, see Billie.

Ci ergo.

See her go.

Forte busez inero:

Forty busses in a row:

Dem aynt busez,

Them ain't busses.

Demis trux.

Them is trucks.

Civates indem,

See what's in 'em,

Couzen dux.

Cows and ducks.

In this example auditory perception makes sense out of nonsense. In short, heteromodal per-

ceptual training becomes a foundation for reading. A single disability may have concomitant disabilities.

There are times when we take a completely contradictory approach. Rather than reinforce stimuli in a heteromodal manner, we may isolate and concentrate on developing a single sensory modality.

A parent or teacher can try to understand and accept the child's disabilities, but he cannot always protect the child from the knowledge of his inadequacy that comes from the child's own interaction with others. He soon experiences that he is out of step. Everyone else knows what the score is; they can read—he must ask. He knows he does not measure up to his peers. Added to his problems may be the impatience or annoyance of parents and teachers, who feel that his confusion or odd behavior, his apparent refusal to learn, is willful in order to attract attention or to annoy.

PSYCHODYNAMICS OF THE BRAIN INJURED

We have discussed briefly the problems arising from brain injury as they relate to perception and reading. An additional factor is that most of these children have such severe emotional overlay as to further complicate the adjustment to the learning process and to life.

Teaching techniques are of no avail when the child is unavailable. Understanding the genetic development of the child (see, for example, points of view expressed by Piaget and Gesell) is necessary. Understanding of the emotional and personality development from a Freudian viewpoint gives one further insight. We have found that the work of Erik Erikson(7) has added a new dimension to our understanding. He has drawn from the disciplines of cultural anthropology, psychology, psychiatry, and sociology and has integrated them in a meaningful way.

The application of Erikson's theories has given us a rich psychological base from which to draw. It has enabled us to attain a better understanding of the child. So many of the children with whom we work are overwhelmed by the complexity of the world around them. They do not understand this world, they do not understand adults or their peers and, least of all, themselves. Erikson's framework sets for us the task of step-by-step development of ego identity. This has pointed our work in the direction of building ego strength through mastery.

Erikson described, as a conceptual framework, eight stages in the psycho-social development of man, which he parallels to Freudian psycho-sexual development. Each stage is polarized by the extremes of success or failure. Normal development proceeds with the successful

mastery of each phase. For us the meaning is that, should failure ensue, the child will either remain fixated at that stage or regress to an earlier stage of development, or he may vacillate between stages.

We have paraphrased Erikson's scheme of four of these developmental stages to help illustrate some of the case histories to follow. These four stages must be fulfilled in order that, at the end of adolescence, the individual is able to function independently and to evaluate critically and assimilate the academic situation.

STAGE I:

No ego.

STAGE II:

Differentiation
of self (ego) and
outer world. (2) Mast-
ery of body
function.

STAGE III:

Beginnings of ego
turning to outer world.
Early mastery through play.

STAGE IV:

Stage of curiosity. Ego
so developed that energy can
be diverted to book learning.

LEARNING—AS THE CHILD DEVELOPS:

- I. "I learn from mother."
- II. "I learn through bodily control."
- III. "I learn through play."
- IV. "I learn through books."

Illustrative Case Number One:

John is a ten-year-old boy of normal intelligence. A battery of psychological tests suggested a slight brain damage which was later confirmed by a neurologist. This injury interfered with John's learning in the public school, which in turn created such emotional problems that his social adjustment was affected. Because John could not read and was teased about this, he avoided playing with boys his own age. He became belligerent and withdrawn and, as a result, provoked others. He regressed in his behavior to that of a much younger child, sulked, was unhappy, and made his family equally unhappy. The teacher repeatedly confronted him with his deviant behavior and made clear to him that each time he failed, he was reacting as an infant would. He soon learned that he was projecting the blame for his own inadequacies onto

other people and other children, blaming others for his failures. As he saw the relationship between his infantile behavior and his learning difficulties, he began to achieve learning success. Reading began as he built up confidence in himself. These successes spurred him on to further achievements and he would hesitantly, and fearfully, attempt new learning tasks.

Using the methods of sharpening his perceptual acuity which already have been outlined, we discovered that he had a memory defect requiring us to review learned processes with him almost daily, for only then could he go on to further learning. As each step was reinforced, a new process could be added. Phonics were used along with the sight and kinesthetic methods, and new materials and words were introduced slowly. The emotional problems kept interfering. He would say, "I can't . . . it's too hard." Often, a short talk with him in private, away from the other children, would allow him to review his difficulties, gain strength, and return to his class. As he gained self confidence he became happier at home and at school assuming a leadership role with his peers. John needed psychotherapeutic help in order to resolve his unconscious emotional conflicts. Both he and his parents are now receiving such psychiatric help through a local clinic. John is back in public school, and it can be anticipated that he will be able to continue at a normal rate of progress.

Illustrative Case Number Two:

Tom was referred at age six with far more severe problems than John's. He was described by the referring psychologist as follows:

He appears to be a child of superior to very superior, innate intellectual endowment who is presently functioning in the average range. There are indications of visual perceptual involvement, motor difficulties, hyperactivity, distractability, and perseveration. Tom also has continuing difficulty in the use of language symbols which makes for a real problem in his conceptual functioning. His overall behavior and his intellectual and learning performance are being complicated by his emotional problems and the stress which exists within the home.

In my opinion a school placement for Tom is indicated which should be tailored to the unique needs of the brain injured child. In spite of the markedly apparent emotional difficulties, it is my opinion that formal psychotherapeutic help is presently contraindicated. Tom needs an educational and training situation, tailored to his own specific problems, but conducted in a generally psychotherapeutic

atmosphere, inasmuch as his emotional problems do not presently preclude his profiting significantly from further educational experience.

At first, Tom worked alone with his teacher in a small room and objected when any other person or child entered. He was described by his teacher as being "like high voltage."

All his actions and reactions are driven by strong inner forces. He bursts into school every morning like a volcano . . . he has many bizarre behaviorisms such as compulsive drawing of circles, pools, and drains, taking off knobs, taking toys apart, dismembering anything jointed and tearing everything apart . . .

He had never eaten solid food. He was offered cookies, bananas and, finally, a sandwich which he ate for the first time—very slowly and with anxious and disturbed grimaces . . .

He smelled hair compulsively, going to everyone in the school and asking to smell their hair . . .

He became anxious whenever he had to make decisions.

Tom worked for about four months with this very warm, accepting teacher, who was also firm with him, and he showed great gains. He was then able to share his teacher with other children and learned to work with them. He still demanded individual attention, but began to work with other teachers as well.

He made great strides in his learning in all perceptual areas. He learned to identify basic forms, to differentiate between like and unlike objects, to find missing parts of objects and to trace precisely, to draw animals, houses, people, faces, etc.

Tom used both hands alternately. Because he could not tell his right side from his left, he could not dress himself. It was as though he felt that there was only one side to his body. When he would put one leg into his trousers, he did not know at all what to do with either his other leg or the other trouser leg. We established laterality for the left side, but also worked on gross motor coordination with both hands.

Tom, different from many other brain injured children, rapidly made the transition to the process of reading printed symbols. He learned all the letters and also developed number concepts. He had difficulty pointing to objects and enumerating them because of his perseverative tendency. We combined rhythmical exercises with his counting and, thus, overcame this difficulty. He became most skillful in handling various materials. Both fine and gross motor

coordination improved. He enjoyed and benefited from physical exercise, which helped him drain off his hyperactivity and to release tensions.

He was ready to enter a class of five children with a new teacher about one year after enrollment. He was then age seven. His second teacher reported his progress as follows:

When he first entered the group, he was very restless, would leave his seat, and would continuously ask questions about the other children in the group. When presented with written work, he could not proceed alone and needed constant encouragement. In oral work, he could not concentrate on the topic at hand, but would digress to seek personal information. He settled down gradually, became more confident and learning progressed . . .

His reading progressed and is now at the upper first grade reading level. He has learned to add and to subtract, and his writing has improved markedly. He is up to his grade level, academically . . .

His greatest progress is in the area of social behavior. He can now work alone, maintains himself in a competitive group—as in games—and is becoming creative in art and clay work. He is one of the best behaved in our group and does not exhibit any of his previous bizarre behavior. Much of his nervous tension is on the wane and he is beginning to organize his energy into more acceptable channels.

The case of Tom illustrates how this child with a severe brain injury, complicated by serious emotional problems, passed rapidly through the four stages diagrammatically illustrated. It is possible that at a later date individual psychotherapeutic assistance will help him to work through his conflicts on a deeper unconscious level.

The illustrative cases heretofore presented were ones where the diagnoses were clear cut. The brain injury could be identified either by psychological or neurological evidence, or both, and the presence of emotional components was evident in the behavior as well as on the psychological tests.

Frequently, however, this is not the case. It is often not possible to determine whether there is an organic factor present. Diagnosis then becomes a very complicated and difficult task. We are faced with a child who is very much in need of help; one who has usually had many frustrating school or hospital experiences.

The experiences which we have had with such children have shown us that a child who

is considered to have only an emotional problem very often will present many of the same behavioral and learning difficulties that an organically impaired child does. This child, whose primary etiology is emotional, may still have some perceptual handicaps, language difficulties, inability to relate to people, inability to play with his age mates, hyperactivity, perseveration, difficulties in concept formation, and live in a world of fantasy. Medical science has still not reached that stage where it can say positively that there is no organic basis, metabolic disturbance, or chemical change or imbalance that may be causative of mental disorder.

Illustrative Case, Number Three:

Paul is illustrative of a psychotic child. He was always different—he did not speak, he was withdrawn, he lived and played in a world of his own fantasy, did not relate to any person, ate poorly, slept erratically, and would not allow himself to be toilet trained. At the age of two he was studied and diagnosed at Johns Hopkins University. The diagnosis was "early infantile autism" (autism is defined as a tendency in one's thinking or perceiving to be regulated unduly by personal desires or needs, at the expense of reality. It is a turning inward, unduly, toward oneself(8).) This diagnosis was followed by therapy for a short period for both Paul and his parents. The prognosis for Paul, as for other autistic children, was considered to be poor.

Paul was brought to our school when he was five years of age. He still had almost no speech, and that which was present was irrelevant, autistic and perseverative. He was still not toilet trained, he would go into violent outbursts at any frustrating stimulus and was unable to channel any of his activities constructively. No formal testing could be done with him. After about one year at this school, during which time we played with him, talked with him, presented him with as much work and structure as he could tolerate, he permitted us to test him. At that time, his I.Q. was about 70.

It might be important to digress here for a moment in relation to I.Q. We believe that a number such as that indicated for Paul is not a definitive static thing but, rather, is something which shows us a child's functioning level at that given time. With Paul we knew that he had a far greater potential than indicated by the test. This was confirmed with each succeeding test. The following year his tested I.Q. was 99. At the end of three years, with only part-time at the school, Paul was working at a third or fourth grade level academically, spoke clearly and to the point, related well to children and adults, and finally entered public school where he has made a fair adjustment.

Paul taught us a very important lesson. Language development generally was accelerated and sharpened as he learned to read. In this unusual case we can speculate that the mastery came through learning. It brought about such ego reinforcement as to enable him to progress relatively rapidly through the psycho-social and psycho-sexual stages. As he struggled with the structured materials, he developed concepts which reinforced reality rather than the fantasy he preferred. The reading materials provided a vehicle for the expression of relevant ideas. Paul is still an "odd" little boy. He will probably be an eccentric adult, but he will make it . . . he will be able to find his niche in society.

In the retelling of our work with these children, and in compressing the histories into such brief synopses, one may draw the impression that the work is all successful and that the progress is always fast and always positive. This is not so. Some children can be improved to a point where they are able to adjust at a higher level in an institution. Some will always need a small private school environment. Others are readied for the special training programs in the public schools. However, we feel that each child is entitled to reach that degree of development which is optimal for him.

We have discussed in this paper some gross perceptual difficulties and their concomitant relationship to the reading process. Our work with children with severe learning difficulties affords us an opportunity to develop insights into normal functioning.

Since these children would stop progressing in their reading unless each minute sequential step was explored, we were literally forced to break the reading process into minute increments. From distorted functioning we were able better to understand the normal reading process. It is our estimate that many children with reading problems would be aided by an early developmental, perceptual program.

Thus, the cycle is complete—from the atypical we learn about the normal; and from the normal we learn about the atypical.

BIBLIOGRAPHY

1. Gesell, Arnold, *The First Five Years of Life*. New York: Harper and Brothers, 1940.
2. Alice and Jerry Basic Reading Program. Evanston, Illinois: Row, Peterson and Company, 1957.
3. Montessori, Maria, *The Montessori Manual*. The W. E. Richardson Company, 1913. (Translated by Dorothy Canfield Fisher)
4. Bodwin, Raymond Franklin, "The Relationship Between Immature Self Concept and Certain Educational

Disabilities." East Lansing, Michigan: Michigan State University, 1957. (Unpublished Doctoral Dissertation.)

5. Dubnooff, Belle and Chambers, Irene, *See What I Can Do—A Pre-Reading Workbook; Look, I'm Reading—A Beginning Reader*. San Bernardino, California: Franklin Teaching Aids, 1958.
6. Piaget, Jean, *Language and Thought of the Child*. New York: Harcourt Brace, 1926. (Translated)
7. Erikson, Erik, *Identity and the Life Cycle*, New York: International Universities Press, Incorporated, Volume I, Number 1, 1959. (Case Number 1: Identity disguised)
8. Kanner, L., "Problems of Nosology and Psychodynamics of Early Infantile Autism." *American Journal of Orthopsychiatry*, XIX (April 6, 1949),



Reading in High School: Some Programs in Action

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*Panel Chairman**

Interest is high in the area of secondary school reading programs. This interest lies not only with teachers and administrators, but also with the high school students and their parents. It is developing as a consequence of much wider recognition among all that reading is a life-long activity, essential to every citizen in every walk of life.

There is no doubt in our minds that reading has been taught more effectively in the secondary school in recent years, even under the handicaps of overcrowded classrooms, half-day sessions, few materials, and the like. However, the past focus on reading has been primarily to provide remedial instruction for those with severe reading handicaps. Today, the focus is shifting to include reading programs in the high school for more, or even all, levels of instruction. In a recent survey conducted by one of the panelists, for example, it was found that, of 52 schools reporting, only six had no special reading program; and of the remaining 46 schools, all were doing something to aid the reading growth of students at least in the ninth grade. The total picture, for 52 schools in the Southern California area looked like this:

*Mr. Wamba is Reading Improvement Teacher, Chaffey High School, Ontario, California. Other panel members were: William Brady, Reading Consultant, West Covina Unified School District; Helen Power, Reading Teacher, Alhambra High School, Alhambra; John Hunt, Reading Specialist, Northview High School, Covina Unified School District; and Irwin Fields, Reading Coordinator, Centinela Valley Union High School District.

SOUTHERN CALIFORNIA SCHOOLS PROVIDING INSTRUCTION IN READING*

	9th Grade	10th Grade	11th Grade	12th Grade
Instruction for ALL provided by:	12 schools	7 schools	4 schools	4 schools
Remedial programs provided by:	27 schools	17 schools	12 schools	9 schools
Programs for the average student provided by:	9 schools	5 schools	6 schools	4 schools
Programs for accelerated students provided by:	9 schools	6 schools	4 schools	6 schools

Reading programs differ, of course, by area which the schools serve and according to what administrators and instructional staffs find practical for their purposes. The ideal programs might be considered those which reach all levels of students. Although there has in recent years been much emphasis upon the idea that all departments and teachers are responsible for the reading growth and skill attainments of students in each subject matter field, the realization of this objective seems far away. The attainment of reading abilities in each field appears too often to become, at best, a secondary objective of the teacher. He is more inclined to place all of his attention upon instruction in the content area for which he is responsible and to "leave reading to the English teacher."

Helping students improve their reading skills and abilities through direct instruction, in classes designed to achieve this objective alone, appears to be a practical solution to the problem. In the ideal developmental program, the emphasis of instruction is on comprehension and speed. The result of this emphasis is efficiency in reading. Efficiency, in turn, builds greater effectiveness as a reader. When young people apply these skills to specific content areas, they tend to read with greater meaning, speed, and retention.

Selecting the type of grouping which will be used in working with students in this type of developmental reading program for adolescents and young adults appears to be a matter of personal preference. In well rounded programs, students seem to make satisfactory progress under widely differing systems of grouping. However, homogeneous grouping is most widely

* Sizes of schools reporting are as follows:

600-1,000 students—two schools reported, both offering 9th grade remedial reading.

1,000-3,000 students—twelve schools reported, one having no special program in reading while two were offering instruction beginning with the 1961-62 school year.

3,000-8,000 students—five had no special program in reading. Of the remaining 31, two were providing remedial work for all levels and six were giving some kind of instruction at all levels.

used. The greatest single factor in developing an effective reading program, nonetheless, appears to be small instructional groupings not in excess of fifteen or twenty students.

In the following descriptions of programs in action, varying practices are being followed with success. We believe, however, that each program has special strengths or advantages for the area and student body which it serves. We can see, through the diversity indicated here, that each program must be developed within the particular school district which desires it, according to the needs of students as they are understood by the teaching faculty and the ability of the school district and its patrons to provide adequate staffing and equipment for it.

A REMEDIAL READING PROGRAM*

How the program came into being. The development of a reading program in West Covina was an outgrowth of the need for remedial instruction. There was administrative interest in the remedial student. As a result, the reading consultant provided remedial instruction of a modified clinical type.

Selection of students. Referrals for the program are made as a consequence of (1) test scores, (2) recommendations by counselors, teachers, and nurse, and/or (3) parent requests. In initial screening procedures, the nurse first checks the health record and administers the vision test (Keystone Telebinocular). The reading consultant administers a reading test and checks for grade level score, type of reading errors, word attack skills, binocular skills, hand-eye dominance, and attitude toward reading. Further tests are given if warranted.

Instructional procedures. Class size is usually six to eight students. The length of the course depends upon the student's progress, his needs, and the backlog of students waiting for instruction. Students are taken from English classes and are given English credit for the reading instruction as they are not able to accomplish regular class work in English during this time. A wide variety of learning activities is used with individuals and in groups. Materials and equipment employed in the instructional setting include the following:

A. TESTS

1. Keystone Telebinocular
 - a. Long form vision test
 - b. Spache Binocular Reading Test
 - c. Gray's Oral Test of Binocular Reading Skill

*This program has been developed at the West Covina Unified School District, West Covina, California.

2. Leavell Hand-Eye Dominance Test
3. Van Orton Star Test
4. Gilmore Oral Reading Test
5. Bender-Gestalt Motor Coordination Tests

B. MACHINES

1. Keystone Correct-Eye Scope
2. Delacato Stereo Reader
3. Tape recorder
4. Controlled reader
5. Tachistoscope (*Learning-Through-Seeing Filmstrips*)
6. Reading pacers

C. KITS

1. Science Research Associates *Reading Laboratory IIIA*
2. Science Research Associates *Reading for Understanding*

D. BOOKS

1. *Work Attack*, by Roberts
2. Dictionaries
3. *Phonics*, by Herr
4. Deep Sea Adventure Series: *Sea Hunt*, *Treasure Under the Sea*, *Submarine Rescue*, *The Pearl Diver*, and *Frogmen in Action*.
5. *New Trails in Reading*, by Hovius
6. *Modern Reading* (Books I, II, III)
7. *Be a Better Reader* (Books I, II), by Smith
8. *Reader's Digest Skill Builders*
9. Library "easy reading" books
10. Teacher made and designed materials

A NINTH GRADE READING COURSE*

How the program came into being. The philosophy behind the reading program for ninth graders at Alhambra High School is to give reading development training to all college preparatory stu-

*This program has been developed at the Alhambra High School, Alhambra, California.

dents who have been revealed as especially slow readers or who are one and a half years below grade level. The first experimental class of tenth graders was begun in 1943. The second stage of development for the program came between 1944 and 1957. The course was expanded during this time to include tenth grade students of average intelligence in need of reading training and students of somewhat lower intelligence who were college preparatory. The present program, in existence since 1958, has been changed to encompass the same grouping of students but for the ninth instead of the tenth grade. Since the inception of the program, there has been a gradual expansion of the quantity and variety of instructional tools and materials used in the program.

Selection of students. At present, classes are selected by test scores obtained on the *California Achievement Test* (Reading and Vocabulary sub-scores), and the Eighth Grade teacher's recommendations. Further placement is gauged by I.Q. and the *Iowa Test* given during the second semester of the ninth grade.

Instructional procedures. The general course content and procedures followed are:

Tachistoscope—two days a week (for developing concentration, accuracy of perception, phrase reading, and speed)

Controlled reader—two days a week (for eliminating regressions, training correct eye movements, concentration, retention)

Science Research Associates Laboratory—two days a week (for word study, comprehension, and efficient reading skills)

Vocabulary test—one day a week (emphasizing word attack, prefixes, root words, suffixes, phonics, and spelling)

Study of other skills (paragraphs, key word reading, and skimming)

Brief grammar assignments

Iowa Reading Tests

Notebook requirement—graphs and charts of all procedures, including a nightly reading chart of all recreational reading

The results of the program show: (1) an average improvement of two and one half years in reading ability as measured on the Iowa Reading Test; (2) a speed increase of two and one half years.

A SENIOR READING COURSE*

Purpose of the program and selection of students. The twelfth grade program at Alhambra High School was begun in 1959 as a one-semester course, elective, for the serious minded college bound senior. Five units of non-academic credit are given for this work. The main purposes are to (1) increase comprehension, (2) increase speed to 600 words per minute, (3) develop better and more efficient study methods, and (4) build vocabulary and word attack skills. Students are selected by the counselors from applicants. Main consideration is given to IQ and seriousness of purpose.

Instructional procedures. Extensive use is made of the tachistoscope, controlled reader, and pacers. There is a minimum of homework, and that which is given is concerned primarily with vocabulary building. Machine practice is used four times a week and laboratory practice twice each week. There is continual practice in reading for main ideas, details, key words, skimming, to see organization of content, to follow directions, and in listening and note taking. The Kelley-Greene Tests are administered at the beginning and end of instruction for evaluation purposes. Results, based on three classes to date, have shown an increase of from 250 to 600 words per minute and an increase in comprehension from 75 to 80 per cent.

DUAL LABORATORY PLANS: NORTHVIEW HIGH SCHOOL**

How the program came into being. This program was begun to improve the reading and thinking of students in grades nine through twelve of the Northview High School. All students are included in the program on the assumption that instruction in reading will help to strengthen learning in all areas. Experimentation was begun in summer sessions and expanded during the regular semesters to develop a total reading program for the school.

Instructional procedures. During the initial stages of this program, a three week unit was taught by the reading teacher in the English classroom. The regular classroom teacher then taught the unit presented by the reading teacher in his remaining classes. The English teacher, in this way, could use the plans prepared and provided by the reading teacher.

The reaction to this plan was favorable from the start. Teachers saw significant gains in speed and comprehension among their students. Their enthusiasm led to the establishment of

*This program has been developed at the Alhambra High School, Alhambra, California.

**This program was developed for Northview High School of the Covina Valley Unified School District, Covina, California.

a full-scale laboratory program during the following year. Physically, the laboratory consists of two rooms, joined by a storage room. The English teacher brings each of his classes to the laboratory for a six week period of instruction. The classes are tested on the *Nelson-Denny Silent Reading Test* and are divided into two parts. One half of the class is assigned to the laboratory with the English teacher, the other half with the reading teacher.

During the first week of instruction the classes are inducted into the purposes of the laboratory and the procedures which will be followed during the week. This work blends into the remaining five week period in which intensive instruction in reading is given. Homework, unless modified for some specific purpose, consists of lessons from *Be a Better Reader*, by Smith, vocabulary card work, and one half hour of reading each night. Controlled readers, the *Learning-Through-Seeing-Filmstrips*, and the Science Research Associates books and laboratories are used at regular intervals throughout the instructional period.

The ultimate objective of this total reading program is to have all of the teachers in school teach the process of reading as it applies to their subjects. To accomplish this will take more years of concentrated effort. The immediate concern is to involve the English curriculum more directly in the reading program and to train the English teachers to become better teachers of reading. To date, the in-service aspect of the dual laboratory plan appears to be most effective.

DUAL LABORATORY PLANS: HAWTHORNE HIGH SCHOOL*

Selection of Students. All of the ninth grade students at the Hawthorne High School participate in the Reading and Study Skills Program for a period of eight weeks. The groups are taken directly into the laboratory from the English classes. Ninth graders in this school are assigned to homogeneous groups by the counseling office and therefore the reading classes are basically homogeneous in academic ability.

Instructional Procedures. Hawthorne High School has devised twin classrooms equipped identically for reading instruction. One half of an English class is taught by the English teacher, and the other half is taught by a reading specialist who also acts as a resource person for the English teacher.

Prior to entry into the laboratory, the class is tested with a standardized reading test. On the strength of this test score, the class is split into two groups of approximately fifteen stu-

*This program has been developed at the Hawthorne High School and other high schools in the Centinela Valley Union High School District, Hawthorne, California.

dents apiece. Usually, the English teacher takes the students scoring in the upper range on the test, the reading specialist the lower half. In this way, the English teacher can devote more time to learning the methods or techniques and materials of instruction. Three objectives are achieved in this organizational pattern:

1. The classroom teacher is trained in methods of teaching reading,
2. Smaller class groups are formed (approximately fifteen each), and
3. A follow-up program in the classroom is made possible in which the teacher uses materials and procedures with which he has become familiar in the laboratory.

Each of the four high schools in the district has a similar dual laboratory equipped with a tachistoscope, controlled reader, pacers, Science Research Associates Laboratories on elementary, intermediate, secondary, and college preparatory levels, *Better Reading Series*, by Smith, Educational Development Laboratories *Transfer Reading Manual, Word Attack*, by Roberts, dictionaries, pocket books, and other reading materials.

During the eight week program, the objectives which are held for the students include:

1. Raising the reading level
2. Developing a greater liking for reading
3. Increasing comprehension
4. Increasing speed
5. Improving vocabulary
6. Developing better spelling habits

In addition to these basic skills, an attempt to improve study habits is made in the following areas:

1. Taking comprehensive and intelligent notes
2. Perfecting some form of outlining
3. Developing skills in test taking
4. Gaining an insight into and developing a better use of time
5. Developing the habit of neatness in academic work
6. Learning more about research and the writing of papers
7. Developing further library skills

During the last week of laboratory instruction another form of the standard test adminis-

tered at the beginning of the instructional period is given. Growth during the six weeks is assessed in part in this fashion. It is well known that such measures are useful only in a limited sense. In order to get a better picture of growth in reading, a third form of the same test was administered to one group approximately six months following their laboratory work. For this group, it was discovered that not only were initial gains maintained but that students who registered a loss from the beginning to the end of the laboratory instruction regained their initial loss and made even further growth.

There are other important sources for evaluating any program, of course. For example, teacher reaction and evidence of teacher use of the techniques and materials learned during the dual laboratory period are important evidences in this regard. In this program, data have been gathered in both these areas which indicate a favorable response by the teaching staff and many instances of actual use of materials and devices, not only in English classes, but in other content areas of the curriculum as well.

A school-wide reading study skills program has eventuated as a direct consequence of the dual laboratory plan. We have thus witnessed the growth of a program from its pilot stages to a regular part of the school curriculum. At the present time the program is being expanded to involve the eleventh grade, and the future may yet see it develop into a school-wide program of reading and study skills for all students, in all classrooms, and at all levels of ability.

IN CONCLUSION

Reading programs at the high school level, as our examples have shown, encompass widely varying patterns and practices. In all instances, however, we can note that the reading specialist is not replacing the need for reading instruction in the regular classroom. Rather, it is being used as an intensive training ground for teaching the skill of reading and as an in-service program to help teachers of all content areas to understand and teach the process of reading more effectively as it applies to their own content fields.

Evaluation and the Reading Program

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The question of evaluation and its relationship to the reading program of a school or school system is a broad one. When we examine evaluation as it is involved in reading we need to think of it as a many faceted process, differentially applied for varying purposes.

This discussion is focused on three aspects of the process (1) evaluation of the reading program itself, (2) problems in interpreting standardized tests in reading evaluation, and (3) problems in the diagnosis of reading difficulties.

I. EVALUATION OF THE READING PROGRAM ITSELF

From the point of view of the curriculum specialist, five areas seem to demand study as a program of reading instruction is examined. Each is of great importance and must be considered carefully if adequate judgments are to be formed by those concerned.

How broadly does the staff conceive the reading program? A broad gauge reading program should include at least four emphases. We might designate this as the skills program. This is the basic reading program of the school. The evaluator, in this regard, must secure data on such broad questions or areas of concern as the following:

1. Is the program continuous throughout the grades, with each teacher building upon the program in the preceding years to develop ever-increasing ability for each pupil?

2. Is the development of specialized skills in the various content fields seen as a part of the total reading program and is a carefully designed instructional plan in operation in each classroom?
3. Is recreational reading considered a worthwhile part of the basic program? It seems important to discover whether teachers set aside time for such reading on a regular basis and to determine the methods used to secure adequate growth in tastes and interests.
4. Is an adequate program provided to develop reference and research skills? Any good program in this area must provide for instruction in the use of encyclopedias, dictionaries, atlases, and the like. But, in addition, it must pay attention to developing other skills. We now have well illustrated textbooks. Does the reference program help children to read pictures? What is being done to insure the development of adequate levels of skill in reading maps, graphs, charts and diagrams, tables, and cartoons among other things?

Thus, the first stage of evaluation must be concerned with teachers' attitudes toward and conceptions of the basic or skills program. Without a clear, coherent, and continuous program of skill development commonly accepted in the areas listed above, no plan of reading instruction will be adequately comprehensive.

How well does the reading program fit needs? At this point, we are concerned with the manner in which the program is adapted to the needs of the many and diverse types of children with whom we deal each day. No matter how well-conceived a program may be, it is not achieving its goals if it is not flexible enough to allow this to be done. In forming judgments about this aspect of the reading program, answers to questions such as these must be sought:

1. Is the program planned so as to take advantage of and to provide for interests of children at each level of instruction? This question obviously is a broad one and relates to many aspects of the total program. It involves materials of both basal and recreational nature as well as those connected with hobbies, special interests, and the like.
2. Is the program planned so as to allow for differentiated instructional needs? The old cliché of beginning where the child is and taking him as far forward as possible assumes real meaning when applied here. Evidence must be gathered to indicate the degree to which this is being accomplished both for the retarded reader and for the advanced reader.

Very often, it is the latter who is penalized because our instructional programs are not planned to challenge and extend such "gifted" pupils. We must be as careful not to put an arbitrary "ceiling" on development of reading skill for "good" readers as we are to put a "floor" under the poorer readers.

The second broad area for evaluation, therefore, is concerned with the manner of application of the reading program in the classroom.

How good are the reading materials and the reading environment? This area of concern can be approached rather objectively and in terms of readily applied criteria. Such criteria may be derived from a study of appropriate professional literature supplemented by local standards co-operatively developed by a staff. Questions for which answers should be sought include the following:

1. Are the textbooks, both readers and content field texts, of high quality?
2. Is the supply of recreational books adequate in number as well as type and difficulty?
3. Is the supply of current material such as magazines and newspapers well chosen in sufficient number?
4. Are adequate supplies of encyclopedias, dictionaries, atlases, almanacs, and other appropriate reference materials provided for each classroom or school?
5. Are these materials easily available to teachers and pupils in both individual classrooms and, where appropriate, in central libraries?
6. Is the reading environment good in all places where we expect pupils to read? We should be concerned with lighting and comfort as well as quiet or provision for sharing and discussion as the need may indicate.

A well-conceived program may founder if this general area is neglected. A thorough-going program of evaluation must be concerned with gathering data on the questions above and others which might well be added to the list.

How good are our methods and our teachers? At this point in the discussion, factors relating to the teaching-learning process become of concern. Questions relating to professional understanding and performance of teachers in the classroom must be answered. They include, among others, the following:

1. How well does the individual teacher understand the reading process? Is the teacher

secure in his understanding of this complex area or is he merely following a manual in a more or less rote fashion?

2. Do teachers select the instructional procedure best suited to the learning problems of the individual pupil?
3. What provisions have been made to make possible the formation of sound and continuing judgments about pupil needs and progress? Such provision may be formalized or informal in nature. From the standpoint of evaluation the concern is to determine whether some provision has been made and applied in a consistent fashion.

This general area can be the cause of considerable difficulty between a principal or supervisor and a staff if handled improperly. Nevertheless, it is so vital in a comprehensive program of evaluation that it must be included. A professional approach, based on self-evaluation and observation by others, can be developed and used, however. The important concern in this discussion is that an evaluation of a reading program must incorporate procedures to secure adequate answers to these questions.

How good are the results? The final question for which answers must be sought in an evaluation of a reading program relates to the success of the program as it affects children. If a program makes no significant contribution to the educational development of children or, if by omission, important areas of learning are neglected, we may well ask serious questions about the adequacy of our conception and execution. Information must be sought in answer to these questions:

1. Are our pupils skilled enough in reading to carry on at the next educational level? While reading cannot be thought of as a skill completely developed at one level to be used at another, nevertheless a sound reading program should result in a solid foundation from which to carry on further development. For some, this further development will be at a lower level than for others, but each educational level or school segment must make its appropriate contribution if full realization of each pupil's reading potential is to be reached. A good program of reading instruction must be concerned, not only with the present needs of pupils but to some degree also with future demands they will face.
2. To what degree have we achieved the broad aims of our programs? Are pupils reading worthwhile books? Do they use reading to satisfy interests and curiosities and to contribute to well-being? If these and other similar aims are legitimate objectives of read-

ing programs, an evaluation must secure evidence to determine the degree to which they are being achieved.

3. Are results of evaluation being "fed back" into our programs in such a way that constant progress and improvement is taking place? Far too often, test data and other findings of the evaluation program do not find their way to those who can most effectively use them for improvement. If one purpose of evaluation is to secure data pertaining to results, then surely another, of equal or greater importance, is to use these data as the basis for developing stronger and more effective reading programs at all levels of school planning from the central office to the classroom where the program is implemented.

PROBLEMS IN INTERPRETING STANDARDIZED READING TESTS

Although we may recognize readily that an adequate evaluation program involves many facets, special attention should be given to problems surrounding the interpretation of standard tests, if only because these instruments are so widely used in our schools. In interpreting standardized tests one must first realize that no test measures, or could be expected to measure, all of the various aspects of reading. Although tests frequently yield an impressive "total reading score," the evaluator must view this score as representing only those elements of reading sampled by the test.

Tests having the same name often have been shown to measure quite different reading behaviors. No test should be taken at "label" value, therefore. Students can achieve normal grade placement values on survey tests and yet be quite inadequate in important areas of reading which were not sampled by the test. For example, *at the present time no test adequately measures ability to read for different purposes*. Many other important objectives of the total reading program similarly are not sampled in a survey test. We must rely on impressionistic and subjective methods in evaluating certain areas of reading.

If the test-user has not been trained in "test manual reading," he sometimes will be lost in statistical jargon and misled by unwarranted claims. For example, one widely used reading test of the survey type presents individual diagnostic profiles for examinees on several subtests within both the vocabulary and comprehension areas of reading, together with extensive instructions regarding appropriate educational usage of these profiles. The manual accompanying the test does not report data regarding the reliabilities of these subtests. By working in reverse with

the Spearman-Brown formula all of these subtests can be shown to have reliabilities below .70 and several below .60. *Reliabilities of such magnitude hardly support claims for individual diagnosis.* The manual further suggests that when a pupil's obtained grade placement score differs from his expected score by as much as one grade level, significance has been reached yet, statistically, a difference of approximately 2.8 grades would be required in order to reject the hypothesis of chance variation at the .05 level of confidence. Obviously a teacher must have more knowledge than the test manual supplies in order to use this reading test properly.

There is a trend toward more testing in the schools. There is also increased interest in group diagnostic testing. Closely related to such diagnosis is teacher self-diagnosis, a fruitful area of test usage that has been largely overlooked. A teacher could learn a great deal about her own specific strengths and weaknesses by comparing class end-of-year ratings with beginning-of-year ratings. A detailed study of class responses to individual items can yield further data since the same relative reliability is obtained when 30 persons answer one question as when one person answers 30 items. Thus a single item may be diagnostic for the total class even though not for one pupil. Naturally, the term self-diagnosis means the results would be available only to the teacher.

It is not the *reliability* of a test but rather its *standard error of measurement* that has concrete meaning where test scores are used with individuals. Test reliability is most useful in comparing different tests, the SE_M when interpreting individual scores on the same test. The SE_M indicates how accurate the obtained score is. Two-thirds of the time the obtained score will be within one standard error of measurement of the "true score." If an individual was given many alternate forms of the same test, assuming he himself did not change during the process, the standard deviation of his obtained scores would be the SE_M and his mean score would be his "true score." The SE_M is therefore the standard deviation of the differences between obtained scores and "true scores" on a given test. Many misuses of test results would be corrected if users would see test results as bands determined in this way rather than as points.

We have been considering problems in test reliability which should not be confused with validity. Reliability implies only consistency of results. A test can be highly reliable and have no validity for the purpose for which it is being used. Validity relates to whether the test is measuring performing the function for which it is being used.

The matter of test interpretation poses many other problems for test users. Grade place-

ment norms are not on a scale of equal units. Being accustomed to the properties of time, length, weight, etc., one tends to overgeneralize qualities possessed by these scales to measures such as grade placement and mental age which are much less refined. For example, the difference between grade placement values of 1.0 and 2.0 in terms of score units is often much less than the difference between grade placement values of 2.0 and 3.0 on the same test. In addition, some skills change very little after the elementary grades. High grade placement values therefore lose their meaning in these areas. They are most serviceable in the elementary grades. They are least defensible in interpreting scores for examinees with grade placement values which deviate greatly from their present grade level.

Percentile norms are easily understood and should be used when interpreting reading achievement to parents. Care needs to be taken, however, to interpret them as percentiles, not percentages. They, too, are plagued by lack of equal units. The ability difference necessary to change percentile ranks near the mean is much less than that required at the extreme. All types of derived scores have some specific strengths and weaknesses of which the test user should be aware in order not to misinterpret test data.

Tests should be selected therefore on the basis of their ability to measure the particular reading objectives in question. Curriculum and guidance specialists should make a thorough, critical evaluation of each test they contemplate using in regard to its qualities of reliability, validity, standardization, type of norms, and other practical considerations. These prerequisite steps do not, however, insure that educational value will accrue simply from using the best test for a given purpose. Teachers must be provided in-service training regarding what information can and cannot be obtained from the tests, the degree of confidence that can be placed in the results, and the manner in which to translate the objective results into differential educational practices. It should be apparent that an adequate evaluation of the total reading program involves the total personnel of the school actively participating in the subjective as well as objective aspects of reading assessment.

PROBLEMS IN THE DIAGNOSIS OF READING DIFFICULTIES

The first question to ask when discussing diagnostic work in reading is that of purpose. The purpose of the reading aspect of diagnosis, omitting for this discussion other very important related aspects of diagnosis such as mental, physical and emotional factors, is to determine what specific reading skills a given child has and, conversely, what he lacks. More specifically,

the facets of reading for which to look, are word analysis skills, size and depth of vocabulary, and quality of comprehension.

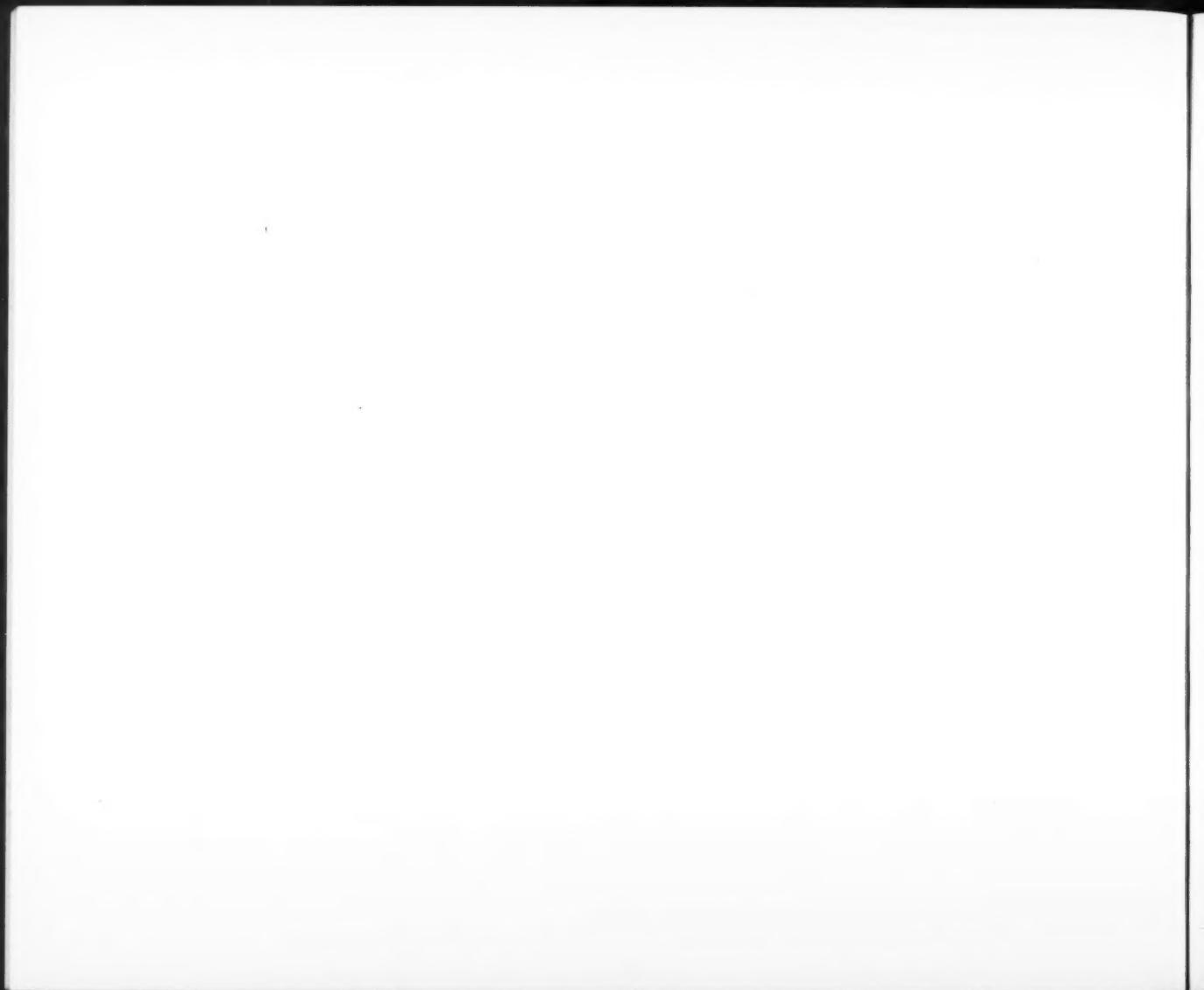
The term word analysis skills, for example, covers such aspects of unlocking unknown words as structural analysis and phonic analysis. Structural analysis refers to dividing words into syllables, and recognizing roots, affixes and meaning units. Phonic analysis, of course, deals with the sounds associated with the letter symbols either alone or in combination, and includes the problem of blending. Both structural and phonic analysis includes certain rules or generalizations which help the reader discover the most probable pronunciation of a given word which is not immediately recognizable as a sight word. Some knowledge of the place of accent or syllabic emphasis is involved here, also.

Diagnosis for possession or facility in the use of these skills is of necessity rather informal. Some tests do purport to measure things but they tend to be somewhat artificial and non-contextual. Observation of the procedures used by a child in an oral reading situation will reveal much valuable information on which to base an instructional program. To make such an observation, the diagnostician must have a thorough personal knowledge of word analysis skills so as to identify their use and misuse by a child who is reading orally in a formal or informal reading situation.

The next point to consider is vocabulary. This is intricately entwined with comprehension and can be separated only for discussion purposes. By the term vocabulary is meant both sight vocabulary and meaning vocabulary. Diagnosis should yield some indication of the size of the sight vocabulary—those words that can be recognized instantly on sight. Several lists of words are available for this purpose. In addition, the list of words introduced by grade levels in any basal reading series could be employed. Knowledge of the size of the sight vocabulary is necessary to give the instructor an indication of whether to start on developing a larger sight vocabulary by sight methods or by word attack skills. Each can result in developing a larger sight vocabulary.

The diagnosis of the quality of meaning vocabulary, however, is more important than a knowledge of the approximate size of the sight vocabulary. Knowledge of the meaning of words in isolation can be determined through various oral or paper pencil tests, such as the Binet, the WISC or the Gates Survey. Vocabulary in context is measured by the reading tests in the SRA Achievement Series. Informal appraisal of the varieties of meanings and shades of meanings yields much valuable additional diagnostic information.

Comprehension is the key aspect of reading. Without comprehension, reading can hardly be said to occur. But comprehension is not a unitary factor. Diagnosis of reading comprehension would include discovering the pupil's ability to grasp the general idea or main theme of a selection, to get specific factual details, to relate items in sequence of time and cause and effect, to draw conclusions based on the relationship between facts given but not specifically related by the author and to come to inferences based on the relationships between facts supplied by the author and facts or understandings supplied by the reader. Some tests contain many of these kinds of items but most do not yield subscores that are so identified. The diagnostician must then interpret the test results of a given child by looking at the individual test items passed and failed. Informal analysis can again supply much of this information provided the examiner knows that for which he is looking.



Reading Teaching Machines

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Whenever the words "teaching machine" are uttered before an audience, someone usually reacts this way: "Teaching machines are newfangled gadgets which some people want to use in place of teachers."

This reaction contains two misconceptions. The first is that teaching machines are new, with the implication that they are therefore untried. The second is that teaching machines are intended to replace teachers. This second misconception is wider-reaching in its implications and most of what I have to say will bear upon these implications.

It may surprise some of you to know that experiments with teaching machines were being conducted 35 years ago. The experimenter was Dr. Sidney L. Pressey, still an authority in his field, and some of the devices he used were similar to machines in use today. However, the world of education apparently was not ready for Pressey's machines. Further development of the psychological theory of the learning process was needed before teaching machines attracted general interest.

At this date, it seems fair to say, there are two main channels of thought on automatic tutoring. Both are based on research in the science of behavior, and thus have some things in common although widely differing in other aspects. In addition to these two main channels, there are several interesting tributaries, but since most of these are devoted to specific applications rather than to the wider range of general education, I will concentrate on the main schools of thought.

One of these schools is led by Dr. B. F. Skinner of Harvard, a leading researcher in the study of animal—including human—behavior. The other is led by Norman Crowder, technical director of our own team at Western Design and Electronics. The most apparent difference between the two is in the construction of the learning programs each advocates.

Skinner uses the so-called straight-line program. In such a program, every student sees exactly the same material. Information is presented in tiny steps, often a sentence at a time. The sentence is followed by a question, usually requiring a one-word response from the stu-

dent. No matter what response the student makes, he is immediately given the correct answer. To compress several books into a sentence or two, the idea is to present the program in such easy, logical steps that the student will not make mistakes. If a student does make a mistake, the mistake is ignored; the system makes no provision for dealing with that mistake.

Crowder uses the intrinsic program, often referred to as a branching program. In this method of programming, the student's response to a question determines what materials he sees next. In the simplest form of intrinsic program, a paragraph or two of information is followed by a question with a multiple choice answer. The student goes to the page number which corresponds to his answer. If he is wrong, his error is explained, probably he will be shown how to approach the problem, and then he will be sent back to be tested again. If his answer is correct, his reasoning is confirmed, new information is presented, and so on.

This is the basic technique. It is the method used in the TutorTexts prepared by our editorial staff and published by Doubleday. We also use intrinsic programs in machines, such as the AutoTutor. This machine is a rear-projection device for 35 mm. microfilm. A reel of film will contain up to 3000 images. The student selects the image he wants to see by pressing a button.

A great advantage of the machine is that it permits of much greater sophistication in programming than is practical with a book. An AutoTutor program may contain three streams or levels of presentation. The top level, which contains the course in its most condensed form, is seen by all students, but only the brightest or those using the course for review will stay at this level. The next level is one of expanded instruction, aimed at resolving difficulties at each point. And thirdly, there is a level for the student in trouble; it offers explanations in the simplest terms, often employs a different approach, and frequently, after fortifying a student's understanding, washes him back for review. In addition, there are built-in testing sequences and other devices aimed at halting the student who is trying to dodge his way past the questions. Only by demonstrating understanding, can the student work through this intellectual maze.

Remember, by his response the student himself determines the path he takes. When he runs into trouble, he is given extra instruction. When he exhibits understanding, his progress is swift. The result is that no two students take the same path through the program. And no two students take the same time.

To sum up the two methods: In a Skinner-type program, the programmer determines

exactly what each student sees; mistakes, in theory, don't occur. In a Crowder-type program, the student's response determines what he sees; students learn from mistakes.

* * * * *

The branching method has some distinct advantages over the conventional teaching situation. They include:

- (1) Close control over the learning process by presenting material in small, natural steps, and by giving immediate knowledge of results (long recognized as an important teaching principle).
- (2) Active participation by the student, since the student is forced to interact with the program at each step. He must demonstrate understanding before he can go ahead.
- (3) Corrective feedback, which, like a human tutor, tells him why he is wrong and helps him to arrive at the correct answer.
- (4) Self-pacing, allowing a student to go ahead just as fast as he learns. It permits the bright student to progress without waiting for others. It enables the slow student to take his time and grasp understanding, rather than sit in class, too embarrassed to ask a question, while part of a lecture passes over his head for lack of clarity on one point. This one aspect alone may place some students in a real learning situation for the first time in their lives.
- (5) Time savings averaging 50 per cent in conventional situations. Savings that are even more startling have been recorded in many instances.

* * * * *

Perhaps it is becoming apparent that automatic tutoring is accomplished by programs, not by machines. Teaching machines are devices for presenting programs. "Machine" in this sense may be a book, a set of cards, even a blackboard or some other visual aid device, rather than a hardware device. A device without a program is not a teaching machine. Plainly, then, if we are going to look squarely at automatic tutoring, our attention must be on the program, not on the hardware.

A program is the equivalent of the text, the teacher's vocal presentation *and* the chalkwork on the blackboard. Preparation of such a program presents two main aspects, (1) subject matter, and (2) communication of that matter. As far as subject matter is concerned, we need decisions on such points as content, the order of presentation, the amount to be presented at

each step. In terms of communication, we must decide on such details as the level of presentation, and what kind of vocabulary shall be used.

From these stem two icebergs of problems:

What criteria shall we set up for subject range and student level? (Don't forget that programs are being developed in a wide range of industrial applications as well as in the conventional school situation. Even conventional schools pose problems. In electronics, for instance, a high school class is often composed of bright, highly motivated students, able to handle a course additional to college preparation, and of low-grade, poorly motivated students who see in it a class as good as any other for passing the time. In junior college, the class is likely to contain a large element of terminal students, highly motivated but of average level, who want to train as technicians.)

What approach shall we use? Conventional or new? Many current texts are unsatisfactory both in content and in vocabulary. Teaching machines and their programs are potent tools for research. Maybe many ideas will be changed in this field as we analyze research findings.

To overcome these and other problems requires the efforts of a formidable team. A psychologist is needed for the techniques of teaching. An educator or subject matter expert has to decide on the approach to be used and possibly organize the material. Writers are needed for the separate skill of communication, along with editors to pull the project into shape. Then the psychologist is needed again to evaluate through research. From such evaluation arises the basis for revisions and so the process begins all over again. Through continuing refinement, the end product compares with the work of the best teacher—on his best day.

As to research, I do not intend to bombard you with a mass of statistics. Rather I will offer some tentative conclusions.

Our major research project has been with a 19-week course in electronics being prepared for the Air Force and for which we now have several months of tabulations. In addition, we have courses of varying kinds, mostly in mathematics and electronics, in various schools across the country.

Undoubtedly, we can point to the following from use of teaching machines:

Time saving—It is not at all unusual to cut teaching time in half. This factor alone may call for much reorganization in the way that students use their time and the way in which schools plan their curriculums.

Equal test scores as compared with conventional courses, even using "raw" programs.

Motivation—it remains at a high level, long after any novelty factor has worn off.

Our early endeavors have been concerned with questions like these: Can students learn from our method? How does automatic tutoring compare with other methods? Where does the program need refinement?

Now we are getting to: How much corrective feedback is needed? How tough can questions get before the learning process deteriorates? (In a sense, this is the same as, how fast can we go?) And I would like to know: Are we using the correct reading levels? Is humor useful? And if it is, where should it be used? In writing? In illustrations? In addition, we are investigating the possibility of adding audio capabilities to the machines—opening up many new fields, and, inevitably, raising whole new sets of problems.

So far, we have put most of our energies into such fields as mathematics and electronics. But we have also produced programs on such varied topics as bridge, insurance, etiquette, medicine and golf!

As we go ahead, I see no threat to the teacher in automatic tutoring. Quite the reverse, in fact. The major applications of these techniques undoubtedly will be in enrichment courses for the bright students and in remedial courses for those needing extra help; teaching machines will take care of fundamental courses of many kinds; they will do much in research; and they will be of great use, particularly in the armed services, for teaching teachers.

Far from threatening teachers, automatic tutoring will allow teachers to concentrate on the more rewarding aspects of their calling, the personal relationships between student and teacher in which real education is stimulated. Teaching machines, in replacing teacher time, will generate a need for better teachers.

And looking at this subject in broader perspective, I have no doubt that we are at the threshold of a great advance in education, an advance that will provide a mighty and stirring challenge to people like yourselves. In advanced and sophisticated societies like our own, the impact of automatic teaching upon education will be enormous. But it will be greater still in those lands we now regard as underdeveloped—nations in Africa and Asia which are not to be denied in their efforts to compress the progress of centuries into a decade. In their struggle to maturity, there can be no question that one of their most potent allies will be the teaching machine.



Remedial Reading in the High School

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Despite the prominent place given to the acquisition of reading skills, despite the money spent by parents on supplementary aids, and despite the thousands of published studies dealing with reading skills, many students arrive at high school deficient in reading. The question, "What can be done about this?" is still not completely answered. But it would seem that if we seek the causes of these problems their remediation would be more nearly assured.

Five sources of reading difficulties among high school students comprise a high percentage of the causal factors. One of the most difficult to handle is that which has its root in some physiological or organic defect. Unfortunately these are usually beyond the scope of the school to alleviate. A second cause is the result of the mobility of our society. In the early school years the child may move from one school to another, meeting each time different teachers using varying reading methodologies. This may lead to the third factor. The student may have never fully developed independent reading skills. This is further complicated in those school systems in which specific work in reading skills is not provided beyond the sixth grade. In addition to these causes, the child may either have or develop some emotional difficulty which colors and distorts his reading problem.

The obvious first step in remediation is to provide some administrative scheduling of students in difficulty to provide them with instruction to eliminate or at least minimize the problem. Sometimes this has taken the form of providing extra materials in the English class with the teacher supplementing the regular program with extra reading practice. Another approach has been the intensive summer program or a one-semester course, offered as an elective, and drawing on students of the same general grade level. Realizing that such concentrated programs do not always have the staying power desirable, schools that employ homogeneous grouping have found it beneficial and practical to group students with reading problems together. Thus the students continue to work on their problems over a longer period of time, providing a greater reinforcement of skills as well as permitting the reading materials of the English class to be pitched at a level of difficulty in consonance with the general reading proficiency of the class.

Identification of the students can become as complicated as resources permit. Since the term "remedial case in reading" has no precise meaning, the extent and approach of any remedial program will take its cue from the criteria established to discriminate the remedial case from the general population. For our purposes here let it suffice to say that the remedial reading student is one who exhibits a marked discrepancy between his reading achievement and his anticipated level of achievement. Inherent in this selection system are devices to diagnose specific reading difficulties that will be of actual use to the remedial teacher in tailoring the program to the student's difficulties.

Reading entails the development of abilities with regard to rate, comprehension, and vocabulary. Were the students' problems uncontaminated ones of deficiency in one of the areas, the problem would obviously be simple. But no program can successfully emphasize one without taking into consideration the others. To improve the students' reading rate many means are available. Mechanical devices are readily adapted to a variety of classroom environments. The senior member of these devices is the tachistoscope. Manufactured in a variety of types both mechanical and electronic, this technique fosters two phases of rapid reading, concentration and greater width of eye span during a fixation. Although the original investment in the equipment is high, it is very flexible in the materials which may be used with it. The teacher himself can easily prepare slides taken from selections under study.

Several series of motion pictures are useful in improving rate. They have an advantage in providing a learning situation closely resembling actual reading. However, despite the fact that they provide a meaningful story line to retain interest, they tend to be somewhat inflexible in the amount to which their rate may be adjusted. The materials for the movies are prepared, obviously, by commercial sources, discouraging the possibility that they can be used readily with current material under study.

One company has produced a filmstrip projector with a device which flashes a line of material at speeds varying from approximately 75 words per minute to almost 1000 words per minute. Again the cost and the fact that materials have to be specially prepared must be weighed against its potential in improving a student's reading rate.

Another device designed to pace students is an individual machine which covers reading material or directs the vision to the page at a specified rate. An important advantage of these reading pacers lies in their ability to use books that might be under study at the time. It

should be kept in mind that they are for individual use, thus limiting to some extent their usefulness.

All of the devices mentioned have proven their worth in some way. It is notable that all but the tachistoscope place emphasis on comprehension as well as rate. All stress the importance of vocabulary in a way unique to each.

When one uses these mechanical devices there is always a nagging question as to whether or not these habits developed through their use will carry over to the reading situation without their presence. Lacking standardized students, the teacher of the remedial class will find himself using printed materials that have been standardized to give him some notion as to the skill an individual may possess. These tests also can provide him with a fruitful device for improving students in their rate of reading. Typical of these reading quizzes are the materials in the SRA repertoire, the *Readers Digest* line, or *Standard Test Lessons*, to name but a trio of many available. This author has found this type of material very useful in developing rate concomitantly with many other skills. This type of rate building can be in the form of short timed articles with comprehension questions with ascending levels of difficulty. Another form of improving rate may be found in the longer article with a word count in which the student times himself. Here an important factor is introduced. The student is given responsibility for timing himself. He is given the responsibility for improvement, sometimes proving to be an important step forward, skillwise and psychologically.

Teacher devised methods are of equal merit. One such device is to force students to read a short story or article at a predetermined minimum speed. Students are given only a certain amount of time in which to read each page while the teacher inexorably forces him and other laggards to speed up. For full efficiency a comprehension check should follow.

Similar to a galley slave is the remedial student if the next technique is used. This consists in having students swish their eyes across each line to the accompaniment of a beat determined by the teacher. Again, to avoid the possibility that such a device degenerate into an eye exercise, comprehension questions should be given.

Assuming that these methods have "taken" with the students, the next step is to introduce the concept that not all printed matter is to be read at the same rate. Different subjects require different rates. Even within a subject every author demands a special rate according to his style and thought. It would seem that a certain level of sophistication in reading has been attained when the students realize that content determines the rate.

One of the most frustrating problems in reading is the student who can read fluently, has a fine vocabulary, and just doesn't understand a word he has read. How is improved comprehension achieved? One factor must be always considered: Interest. In any materials used, be it stories, articles, books, a wide variety of interests must be provided for. The material should also be ever so slightly above the student's present reading ability so that he is challenged to do his best. If these criteria are met, comprehension improvement becomes easier.

The evaluation of how well a student has comprehended a selection is a problem fraught with prodigious ramifications, the least of which is the statistical aspect when material is to be standardized. Primarily, however, our concern is whether or not the student understood the basic concepts of some written passage. Too often we are content with a simple recall or recognition of the facts. But more than this, comprehension involves the ability to interpret the material, thinking critically about the implications of a certain topic. Certainly comprehension would also involve some appreciation of the style and worth of the matter. In the past many of the prepared materials available to evaluate a student's understanding took the form of simple recall. Fortunately today producers of these materials are aware of the need for greater depth of evaluation and have made provision for more adequate testing.

Never to be overlooked is the fact that material to be used to develop comprehension should also include writings of good literary quality. Without this caution too much of the material studied could easily become trivia with no place in our literary heritage.

With these awesome criteria how does one proceed to try to improve comprehension? One sound method is to provide many reading experiences and practices coupled with questions to fathom comprehension. One device that is frequently effective, especially in the absence of specific questions, is to ask for a summary, either verbally or in written form, that requires that the main ideas be presented.

Another device assumes that a standard paragraph pattern is used. This consists in having students seek the topic sentence and then seeing if it truly presents the basic idea. Developing the topic sentence method is one that masquerades under several names. Here it is listed as the PQRST method. Students Preview the article to get a general idea by looking over the topic sentences. This is followed by a synthesis of Questions dealing with the story. Naturally they must now Read the article followed by a brief Summary. To determine the level of mastery of the reading, a Test is given.

Effective with imaginative students is the stop technique. While reading a story out loud

a halt is called. The student is then asked for an outcome that he feels coincides with the facts so far.

Every student should become alert to different types of writing, important in both rate and comprehension. That is to say, if a student is reading a biography he needs to be alert to the qualities of the person described, the problems he encountered, what his claim to immortality is. In a history book he may be seeking primary causes for certain acts. More succinctly, his reading must have a guiding purpose.

Vocabulary improvement provides a little more specific ground for work than was the case for comprehension. With the English language containing so many derivatives from the Greek and Latin it seems that such study should be profitable. However, in several recent studies, some doubt has been cast on the efficacy of word roots and prefixes in improving understanding of words. Their value in recognition and spelling of the word seems unchallenged.

Some students can profit from phonetic analysis of words. Although this is a battleground that has witnessed some bitter fighting, some students require phonetic reinforcement to assist their further development. Perhaps there is some truth in the thought that if the student has heard the word before the association of visual and aural symbols will strengthen the reading of the word.

Long in use has been the technique of scrutinizing the article to be read for possible words that would cause trouble. This would then be followed by defining and discussing the word before it is read. Certainly this would be true for certain key concepts. Part of this method is the keeping of a word notebook. In it are kept new words encountered in any reading that the student doesn't know.

Crossword puzzles have proved their worth for the author in a clinical situation. Obviously, the emphasis on meaning is there. But more than that is the opportunity to picture the word in its length and in its individual parts. It is possible that the accuracy necessary to get the word correctly spelled in order to fit the puzzle and the other words gives it power in improving vocabulary and word recognition.

Word mastery includes the ability of the reader to recognize words in different situations. Thus any program of vocabulary improvement must include a study of figurative language and figures of speech.

To this author, the most important skill to be learned in vocabulary growth is that of grasping the meaning of the word from context clues. Too cumbersome is the method of always

looking up the word in the dictionary. But as the student improves his ability to ascertain the meaning from its surroundings, he is assisted to more rapid and efficient reading.

As a final word let it be said that in remedial reading instruction the individual is the key. The work is designed to compensate for his weaknesses, complement his strengths.

The Reading Problem and the Junior College

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The Junior College is an institution of higher learning that can offer without serious effect on its curriculum or prestige extensive developmental and remedial work in many subject fields, especially in the fields of writing and reading. As a matter of fact, it is in this area that the Junior College can make a vital contribution to higher learning. Many students, we know, with great educational potential find themselves handicapped by deficiencies in the reading and writing skills. The Junior Colleges, therefore, which have already accepted developmental and remedial training in reading and writing as part of their educational philosophy, are offering a valuable service to their communities. Mount San Antonio College is one of these institutions. In implementing this philosophy, the English Department of Mount San Antonio College offers many classes in remedial and developmental mechanics and reading.

All students who fail the reading section of the English placement examination are required to take a basic reading course and to pass the reading section of that examination before they may enroll in the college composition course. The English basic reading course is designed to assist the student in improving various skills and techniques. Work with reading films, Tachistoscope, reading accelerators, and the SRA reading laboratory (for students with serious deficiencies) gives the student a chance to improve his mechanical and mental skills so necessary for efficient reading. Special emphasis is placed on developing the comprehension skills of vocabulary building, skimming, paragraph analysis, sentence understanding, and critical and evaluative reading. Diagnostic tests are given to discover particular weaknesses; comprehensive reading examinations are given at mid-semester and at the end of the course to measure improvement. The results of this training over a five-year period are more than encouraging. Over 96 per cent of the students who take the course pass the reading section of the placement test. More significant, however, is the fact that the students themselves become aware of their

improvement as the course progresses. They begin to notice improvement in their study habits, their homework, and their work in many of their classes.

In addition to this basic course, the college offers a reading laboratory program. This course is designed to assist the student with serious reading deficiencies which place him in grade levels lower than the average student in the basic reading course. It is designed also to help any student who wishes to develop further an already adequate reading ability. The course is open to all students and runs for a period of nine weeks. Many students are advised by instructors in other departments to enroll in it. In the class the student receives individual assistance because the class is limited in size. The student has many opportunities to work independently on his particular deficiencies, using various reading devices and materials.

Extended Day students may improve their reading in a Reading Skills and Development course, a lecture and laboratory type class combining the effective teaching methods and materials of the basic reading course and the reading laboratory. Many executives and others who need to read large amounts of material rapidly and efficiently customarily enroll in this course.

It is well to remember that there are too many students today who are not realizing their true educational potential because of reading deficiencies. The reading program at Mount San Antonio College, we feel, is helping many of those students.

Why is it that institutions like Mount San Antonio College have to offer such work? What can be done to decrease reading deficiencies?

Inadequate teacher training, teacher shortages, a mobile population, overcrowded schools, failure of students to learn the skills of reading, are some of the most common explanations for reading deficiencies. Each one of these is a contributing factor to the reading problem, but I do not think that they are the true cause of reading failures.

The chief cause, I believe, lies in the nature of the reading process itself. Reading is not simple; on the contrary it is one of the most complex abilities to be taught in the school curriculum. The sooner students, educators, and parents accept this fact, the sooner will come a solution. It is a continuous process, and teaching reading should not end in the elementary grades. Moreover, every teacher, regardless of his subject field, must be a teacher of reading. And finally, the learning and practicing of the reading skills must not stop once the student leaves the school grounds or on the campus; they must be continued at home.

In 1940, Adler, I believe, hit the high point in criticism of reading when he wrote:

First, the curriculum and the educational program in general, from grammar school through college, is too crowded with other time-consuming things to present enough attention to be given the basic skills. Second, most educators do not seem to know how to teach the art of reading. The three R's exist in the curriculum today in their rudimentary form. They are regarded as belonging to the primary grades, instead of extending all the way to the bachelor's degree. As a result the bachelor of arts is not much more competent in reading and writing than the sixth-grader.

It would be unfair if I did not mention that much has been done in the high schools and colleges to correct the faults mentioned by Adler, but there are still not enough high school and college reading programs to cope with the problem. Moreover, there are still too many upper-level teachers who do not know how to teach reading or who believe it should be taught only in the lower grades.

One positive step, then, is to make reading instruction required for all students to the junior year in high school. For those students found deficient on reading tests, it should be a remedial course through the sophomore year of college. In addition, other reading programs of a developmental type should be made available as elective courses for all students. To do these things will not be easy; it may even mean another year of schooling for all students. If the curriculum was overcrowded in Adler's day, it is even worse today. But these things must be done. To become an efficient reader, we have seen, takes years of training and practice. Moreover, it requires a mature vocabulary, mature experience, and mature thinking to do mature reading. The sixth-grader cannot be expected at his age to master skills and do thinking that belongs ten or more years in the future. Furthermore, we cannot expect him to have the incentive or the discipline to undertake the kind of training that the learning of the mature skills require.

Another step in the right direction is for all teachers, whatever their subject, to teach the reading skills essential for reading efficiency in their field. Our discussion of the different purposes and different types of reading—though brief—showed how necessary is this step. Again this will not be easy. Teachers in most fields today are pressed for time to cover the essential material in their courses. Besides, few teachers have had the proper training in teaching reading to do the job efficiently. But if reading provides the background of experience necessary for further reading all learning, then, is training for the reading process.

These steps suggest some positive things that the educators can do to help eliminate the reading problem. But the parent's job is equally important and difficult, for learning and practicing the skills of reading cannot be done in school time alone. It must be continued at home. Yet home life, too, has changed greatly in the last twenty-five years. No longer is the home the center of the child's activities. The school, church, and the gang organization (often-times with tragic consequences) are taking Johnny out of the home more and more. Television, though undoubtedly the chief time-consuming invention, has plenty of competition from the automobile, the motion picture, and many social and recreational activities. All these factors within the framework of home life play their part in our reading problem.

To combat these conditions, the parent must be interested in reading if he is going to create an environment that will contribute to his children's interest. Johnny must receive help and encouragement from him, for learning the skills of reading is a plateau type of training with long periods of little progress before a new level of abilities is reached. He must also receive from the parent the discipline that will keep him home at the task — sometimes when his favorite television program is on or his friends call for him to join them. His parents must help him to build up real experiences by taking him to places of value. All these things will take time. Are parents willing to accept the challenge?

Like the racial problem and the delinquency problem, the reading problem is a challenge to all Americans. If we are to remain the free and enlightened America, we must have a literate nation.

